



**ATHI WATER WORKS
DEVELOPMENT AGENCY(AWWDA)
MINISTRY OF WATER, SANITATION
AND IRRIGATION (MWSI)**



In partnership with



FRENCH DEVELOPMENT AGENCY

BIDDING DOCUMENTS

for

Procurement of

**CONSTRUCTION WORKS FOR WATER AND SANITATION IN THE
INFORMAL SETTLEMENTS IN NAIROBI**

LOT 2-EASTERN NAIROBI WORKS

VOLUME I :

- BIDDING PROCEDURES AND BIDDING FORMS
- WORKS REQUIREMENTS
- CONDITIONS OF CONTRACT AND CONTRACT FORMS

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Employer: ATHI WATER WORKS DEVELOPMENT AGENCY

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Bidding Documents have been compiled in the following Volumes

- i) **Volume I** - Instructions to Bidders, Bid Data Sheet, Evaluation and Qualification Criteria, Bidding Forms, Works Requirements, Conditions of Contract and Contract Forms
- ii) **Volume II** - General and Particular Specifications and Standard Reference Numbers
- iii) **Volume III** - Engineering Drawings

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PART 1 – Bidding Procedures

Section I - Instructions to Bidders

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A. General

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| <p>1 Scope of Bid</p> | <p>1.1 In connection with the Invitation for Bids specified in the Bid Data Sheet (BDS), the Employer, as specified in the BDS, issues these Bidding Documents for the procurement of Works as specified in Section VII - Works Requirements. The name, identification, and number of lots (contracts) of this International Procurement Competition (IPC) process are specified in the BDS.</p> <p>1.2 Throughout these Bidding Documents:</p> <ul style="list-style-type: none"> a) The term "in writing" means communicated in written form and delivered against receipt; b) Except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and c) "Day" means calendar day. |
| <p>2 Source of Funds</p> | <p>2.1 The Employer specified in the BDS has received or has applied for financing (hereinafter called "funds") from <i>Agence Française de Développement</i> (hereinafter called "AFD") toward the project named in the BDS. The Employer intends to apply a portion of the funds to eligible payments under the contract(s) for which these Bidding Documents are issued.</p> |
| <p>3 Corrupt and Fraudulent Practices</p> | <p>3.1 AFD requires compliance with its policy regarding corrupt and fraudulent practices as set forth in Section VI - AFD Policy - Corrupt and Fraudulent Practices - Environmental and Social Responsibility.</p> <p>3.2 In further pursuance of this policy, Bidders shall permit and shall cause its subcontractors and subconsultants, to permit AFD to inspect all accounts, records and other documents relating to any prequalification process, Bid submission, and contract performance (in the case of award), and to have them audited by auditors appointed by AFD.</p> |
| <p>4 Eligible Bidders</p> | <p>4.1 A Bidder may be a firm that is a private entity, a State-owned entity - subject to ITB 4.3 - or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution. Unless specified in the BDS, there is no limit on the number of members in a JV.</p> <p>4.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this procurement process, if the Bidder:</p> <ul style="list-style-type: none"> a) Directly or indirectly controls, is controlled by or is under common control with another Bidder; or b) Receives or has received any direct or indirect subsidy from another Bidder; or c) Has the same legal representative as another Bidder; or |

- d) Has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
- e) Participates in more than one Bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same subcontractor in more than one Bid; or
- f) Has (or any of its affiliates has) participated as a consultant in the preparation of the design or technical specifications of the Works that are the subject of the Bid; or
- g) Has been hired, or is proposed to be hired (or any of its affiliates has been hired, or is proposed to be hired) by the Employer as Engineer for the Contract implementation; or
- h) Has a close business or family relationship with a professional staff of the Employer (or of the project implementing agency, or of a recipient of a part of the funds) who: (i) are directly or indirectly involved in the preparation of the Bidding Documents or specifications of the contract, and/or the Bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to AFD throughout the procurement process and execution of the contract.

4.3 AFD's eligibility criteria to Bid are described in Section V - Eligibility Criteria.

4.4 A Bidder shall not be under suspension from bidding by the Employer as the result of the execution of a Bid–Securing Declaration.

4.5 This Bidding is open only to prequalified Bidders unless **specified in the BDS**.

4.6 A Bidder shall provide such evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request.

5 Eligible Materials, Equipment and Services

5.1 The materials, equipment and services to be supplied under the Contract and financed by AFD may have their origin in any country subject to the restrictions specified in Section V - Eligibility Criteria, and all expenditures under the Contract will not contravene such restrictions. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment and services.

B. Contents of Bidding Documents

6 Sections of Bidding Documents

6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITB 8.

PART 1: Bidding Procedures

- Section I - Instructions to Bidders (ITB)
- Section II – Bid Data Sheet (BDS)
- Section III - Evaluation and Qualification Criteria
- Section IV – Bidding Forms
- Section V – Eligibility Criteria

- Section VI - AFD Policy – Corrupt and Fraudulent Practices – Environmental and Social Responsibility

PART 2: Works Requirements

- Section VII – Works Requirements

PART 3: Conditions of Contract and Contract Forms

- Section VIII – General Conditions (GC)
- Section IX – Particular Conditions (PC)
- Section X – Contract Forms

6.2 The Invitation for Bids issued by the Employer is not part of the Bidding Documents.

6.3 Unless obtained directly from the Employer, the Employer is not responsible for the completeness of the Bidding Documents, responses to requests for clarification, the minutes of the pre-Bid meeting (if any), or amendments to the Bidding Documents in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Employer shall prevail.

6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information and documentation as is required by the Bidding Documents.

7 Clarification of Bidding Documents, Site Visit, Pre-Bid Meeting

7.1 A Bidder requiring any clarification of the Bidding Documents shall contact the Employer in writing at the Employer's address specified in the BDS or raise its enquiries during the pre-Bid meeting if provided for in accordance with ITB 7.4. The Employer will respond in writing to any request for clarification, provided that such request is received no later than fourteen (14) days prior to the deadline for submission of Bids. The Employer shall forward copies of its response to all Bidders who have acquired the Bidding Documents in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. If so specified in the BDS, the Employer shall also promptly publish its response at the web page identified in the BDS. Should the clarification result in changes to the essential elements of the Bidding Documents, the Employer shall amend the Bidding Documents following the procedure under ITB 8 and ITB 22.2.

7.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

7.4 If so specified in the BDS, the Bidder's designated representative is invited to attend a pre-Bid meeting. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

7.5 The Bidder is requested, as far as possible, to submit any questions in writing, to reach the Employer not later than one week before the meeting.

- 7.6 Minutes of the pre-Bid meeting, if applicable, including the text of the questions asked by Bidders, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Documents in accordance with ITB 6.3. Any modification to the Bidding Documents that may become necessary as a result of the pre-Bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to ITB 8 and not through the minutes of the pre-Bid meeting. Nonattendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.
- 8 Amendment of Bidding Documents**
- 8.1 At any time prior to the deadline for submission of Bids, the Employer may amend the Bidding Documents by issuing amendments.
- 8.2 Any amendment issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Documents from the Employer in accordance with ITB 6.3. The Employer shall also promptly publish the amendment on the Employer's web page in accordance with ITB 7.1.
- 8.3 To give Bidders reasonable time in which to take an amendment into account in preparing their Bids, the Employer may, at its discretion, extend the deadline for the submission of Bids, pursuant to ITB 22.2.

C. Preparation of Bids

- 9 Cost of Bidding**
- 9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 10 Language of Bid**
- 10.1 The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Employer, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language **specified in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.
- 11 Documents Comprising the Bid**
- 11.1 The Bid shall comprise the following:
- Letter of Bid and the Bidding Forms in accordance with ITB 12;
 - Completed schedules as required, including Price Schedules, in accordance with ITB 12 and 14 and as indicated in the BDS;
 - Bid Security or Bid-Securing Declaration, in accordance with ITB 19.1;
 - Alternative Bids, if permissible in accordance with ITB 13;
 - Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2;
 - Statement of Integrity, Eligibility and Social and Environmental Responsibility duly signed, in accordance with ITB 12;
 - Documentary evidence in accordance with ITB 17 establishing the Bidder's continued qualified status or, if post-qualification applies, as specified in accordance with ITB 4.5, the Bidder's qualifications to perform the contract if its Bid is accepted;
 - Technical proposal in accordance with ITB 16;
 - Any other document **required in the BDS**.

- 11.2 In addition to the requirements under ITB 11.1, Bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed Agreement.
- 11.3 The Bidder shall furnish information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.
- 12 Letter of Bid, Statement of Integrity, Bidding Forms and Schedules**
- 12.1 The Letter of Bid, the Statement of Integrity, the Bidding Forms and Schedules, including the Bill of Quantities for unit price contracts or the Schedule of Prices in case of lump sum contracts, shall be prepared using the relevant forms furnished in Section IV - Bidding Forms. The Letter of Bid and the Statement of Integrity must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.4. All blank spaces shall be filled in with the information requested.
- 13 Alternative Bids, Alternative Technical Solutions and Alternative Times for Completion of the Works**
- 13.1 **Unless otherwise specified in the BDS,** alternative Bids shall not be considered. If permitted, the method for their evaluation shall be described in Section III - Evaluation and Qualification Criteria.
- 13.2 **Unless otherwise specified in the BDS,** alternative technical solutions shall not be considered. If Bidders are permitted to submit alternative technical solutions and only for specified parts of the Works, such parts shall be identified in Section VII - Works Requirements. The methods for their evaluation shall be described in Section III - Evaluation and Qualification Criteria.
- 13.3 Bidders wishing to submit alternatives, if permitted under ITB 13.1 and/or ITB 13.2, shall provide all information necessary for a complete evaluation by the Employer, including but not limited to, drawings, design calculations, technical specifications, breakdown of prices, proposed construction methodology, evidence of meeting the qualification criteria, the benefits to the employer for selecting the alternative Bid and/or alternative technical solution and other relevant details.
- 13.4 Only one (1) alternative Bid per Bidder may be submitted and only one (1) alternative technical solution for each permitted part of the Works may be submitted.
- 13.5 **Unless otherwise specified in the BDS,** alternative times for completion of the Works shall not be considered. If permitted the method for their evaluation shall be described in Section III - Evaluation and Qualification Criteria.
- 14 Bid Prices and Discounts**
- 14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Schedules shall conform to the requirements specified below.
- 14.2 The Bidder shall submit a Bid for the whole of the Works described in ITB 1.1, by filling in price(s) for all items of the Works, as identified in Section IV - Bidding Forms. In case of admeasurement contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Employer. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Bid, and provided that the Bid is determined substantially responsive notwithstanding this omission, the highest price of the item quoted by substantially responsive Bidders will be added to the Bid price and the

equivalent total cost of the Bid so determined will be used for price comparison.

- 14.3 The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered.
- 14.4 The Bidder shall quote any discounts and the methodology for their application in the Letter of Bid.
- 14.5 **Unless otherwise specified in the BDS** and the Contract, the rate(s) and price(s) quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. In such a case, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Employer may require the Bidder to justify its proposed indices and weightings.
- 14.6 If so specified in ITB 1.1, Bids are being invited for individual lots (contracts) or for any combination of lots (packages). Bidders wishing to offer discounts for the award of more than one Contract shall specify in their Bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4, provided the Bids for all lots (contracts) are opened at the same time.
- 14.7 **Unless otherwise specified in the BDS**, all duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of Bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.

15 Currencies of Bid and Payment

- 15.1 The currency(ies) of the Bid and the currency(ies) of payments shall be **as specified in the BDS**.
- 15.2 Bidders may be required by the Employer to justify, to the Employer's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the prices shown in the Schedule of Adjustment Data in the Appendix to Bid are reasonable, in which case a detailed breakdown of the foreign currency requirements shall be provided by Bidders.

16 Documents Comprising the Technical Proposal

- 16.1 The Bidder shall furnish a technical proposal including a statement of work methods, equipment, personnel, Schedules and any other information as stipulated in Section IV - Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidder's proposal to meet the Work requirements and the completion time.

17 Documents Establishing the Qualifications of the Bidder

- 17.1 In accordance with Section III - Evaluation and Qualification Criteria, to establish that the Bidder continues to meet the criteria used at the time of prequalification, the Bidder shall provide in the corresponding information sheets included in Section IV - Bidding Forms, updated information on any assessed aspect that changed from that time, or if post-qualification applies as specified in ITB 4.5, the Bidder shall provide the information requested in the corresponding information sheets included in Section IV - Bidding Forms.
- 17.2 If a margin of preference applies as specified in accordance with ITB 33.1, domestic Bidders, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITB 33.1.

- 17.3 Any change in the structure or formation of a Bidder after being prequalified and invited to Bid (including, in the case of a JV, any change in the structure or formation of any member thereto) shall be subject to the written approval of the Employer prior to the deadline for submission of Bids. Such approval shall be denied if (i) as a consequence of the change, the Bidder no longer substantially meets the qualification criteria set forth in Section III - Evaluation and Qualification Criteria; or (ii) in the opinion of the Employer, the change may result in a substantial reduction in competition. Any such change should be submitted to the Employer not later than fourteen (14) days after the date of the Invitation for Bids.
- 18 Period of Validity of Bids**
- 18.1 Bids shall remain valid for the period **specified in the BDS** after the Bid submission deadline date prescribed by the Employer in accordance with ITB 22.1. A Bid valid for a shorter period shall be rejected by the Employer as non-responsive.
- 18.2 In exceptional circumstances, prior to the expiration of the Bid validity period, the Employer may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a Bid security is requested in accordance with ITB 19, it shall also be extended for twenty-eight (28) days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its Bid security. A Bidder granting the request shall not be required or permitted to modify its Bid, except as provided in ITB 18.3.
- 18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial Bid validity, the Contract price shall be determined as follows:
- a) In the case of fixed price contracts, the Contract price shall be the Bid price adjusted by the factor specified in the BDS;
 - b) In the case of adjustable price contracts, no adjustment shall be made;
 - c) In any case, Bid evaluation shall be based on the Bid price without taking into consideration the applicable correction from those indicated above.
- 19 Bid Security**
- 19.1 The Bidder shall furnish as part of its Bid, either a Bid-Securing Declaration or a Bid Security **as specified in the BDS**, in original form and, in the case of a Bid Security, in the amount and currency **specified in the BDS**.
- 19.2 A Bid-Securing Declaration shall use the form included in Section IV - Bidding Forms.
- 19.3 If a Bid Security is specified pursuant to ITB 19.1, the Bid Security shall be a demand guarantee in any of the following forms at the Bidder's option:
- a) An unconditional guarantee issued by a bank or financial institution (such as an insurance, bonding or surety company);
 - b) An irrevocable letter of credit;
 - c) A cashier's or certified check; or
 - d) Another security specified in the BDS;
- from a reputable source from an eligible country as specified in Section V - Eligibility Criteria. If the unconditional guarantee is issued by a financial institution located outside the Employer's Country, the issuing financial institution shall have a correspondent financial institution located in the Employer's Country to make it enforceable. In the case of a bank guarantee, the Bid security shall be submitted either using the Bid Security Form included in Section IV - Bidding Forms, or in another substantially

similar format approved by the Employer prior to Bid submission. The Bid Security shall be valid for twenty-eight (28) days beyond the original validity period of the Bid, or beyond any period of extension if requested under ITB 18.2.

- 19.4 Any Bid not accompanied by a substantially responsive Bid Security or Bid-Securing Declaration shall be rejected by the Employer as non-responsive.
- 19.5 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the Contract and furnishing the Performance Security pursuant to ITB 42.
- 19.6 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required Performance Security.
- 19.7 The Bid Security may be forfeited or the Bid-Securing Declaration executed:
 - a) If a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Letter of Bid, or any extension thereto provided by the Bidder; or
 - b) If the successful Bidder fails to:
 - (i) Sign the Contract in accordance with ITB 41; or
 - (ii) Furnish a Performance Security in accordance with ITB 42.
- 19.8 The Bid Security or the Bid-Securing Declaration of a JV shall be in the name of the JV that submits the Bid. If the JV has not been legally constituted into a legally enforceable JV at the time of Bidding, the Bid Security or the Bid-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.
- 19.9 If a Bid Security is **not required in the BDS** pursuant to ITB 19.1, and
 - a) If a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Letter of Bid or any extension thereto provided by the Bidder, or
 - b) If the successful Bidder fails to sign the Contract in accordance with ITB 41; or furnish a Performance Security in accordance with ITB 42;

the Employer may, **if provided for in the BDS**, declare the Bidder ineligible to be awarded a contract by the Employer for a period of time **as stated in the BDS**.

20 Format and Signing of Bid

- 20.1 The Bidder shall prepare one original of the documents comprising the Bid as described in ITB 11 and clearly mark it "ORIGINAL". Alternative Bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE". In addition, the Bidder shall submit copies of the Bid, in the number **specified in the BDS** and clearly mark them "COPY". In the event of any discrepancy between the original and the copies, the original shall prevail.
- 20.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation **as specified in the BDS** and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid where entries or

amendments have been made shall be signed or initialed by the person signing the Bid.

- 20.3 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives. If the JV has not been legally constituted into a legally enforceable JV at the time of Bidding, then the Bid shall be signed by every member of the proposed JV.
- 20.4 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission and Opening of Bids

21 Sealing and Marking of Bids

- 21.1 The Bidder shall enclose the original and all copies of the Bid, including alternative Bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", "ALTERNATIVE" and "COPY". These envelopes containing the original and the copies shall then be enclosed in one single envelope.
- 21.2 The inner and outer envelopes shall:
- a) Bear the name and address of the Bidder;
 - b) Be addressed to the Employer in accordance with ITB 22.1;
 - c) Bear the specific identification of this bidding process in accordance with ITB 1.1; and
 - d) Bear a warning not to open before the time and date for Bid opening.
- 21.3 If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

22 Deadline for Submission of Bids

- 22.1 Bids must be received by the Employer at the address and no later than the date and time **specified in the BDS. When so specified in the BDS**, Bidders shall have the option of submitting their Bids electronically. Bidders submitting Bids electronically shall follow the electronic Bid submission procedures **specified in the BDS**.
- 22.2 The Employer may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23 Late Bids

- 23.1 The Employer shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB 22. Any Bid received by the Employer after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

24 Withdrawal, Substitution and Modification of Bids

- 24.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 20.2. The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be:
- a) Prepared and submitted in accordance with ITB 20 and ITB 21 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL", "SUBSTITUTION", "MODIFICATION"; and

- b) Received by the Employer prior to the deadline prescribed for submission of Bids, in accordance with ITB 22.

24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.

24.3 No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

25 Bid Opening

25.1 Except in the cases specified in ITB 23 and 24, the Employer shall publicly open and read out in accordance with ITB 25 all Bids received by the deadline (regardless of the number of Bids received), at the date, time and place **specified in the BDS**, in public and in the presence of Bidders' designated representatives and anyone who choose to attend. Any specific electronic Bid opening procedures required if electronic Bidding is permitted in accordance with ITB 22.1, shall be **as specified in the BDS**.

25.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding Bid shall not be opened but returned to the Bidder. No Bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only Bids that are opened and read out at Bid opening shall be considered further.

25.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the total Bid Price, per lot (contract) if applicable, including any discounts and alternative Bids; the presence or absence of a Bid security or Bid-securing declaration, if required; and any other details as the Employer may consider appropriate. Only discounts and alternative Bids read out at Bid opening shall be considered for evaluation. The Letter of Bid and the Schedules are to be initialed by a minimum of three representatives of the Employer attending Bid opening. At Bid opening, the Employer shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with ITB 23.1).

25.4 The Employer shall prepare a record of the Bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot (contract) if applicable, including any discounts and alternative Bids; and the presence or absence of a Bid security or Bid-securing declaration, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

26 Confidentiality

26.1 Information relating to the examination, evaluation, and comparison of the Bids, and qualification of the Bidders and recommendation of contract

award shall not be disclosed to Bidders or any other persons not officially concerned with the bidding process until information on Contract award is communicated to all Bidders in accordance with ITB 40.

26.2 Any attempt by a Bidder to influence the Employer in the examination, evaluation, and comparison of the Bids, and qualification of the Bidders, or Contract award decisions may result in the rejection of its Bid.

26.3 Notwithstanding ITB 26.2, from the time of Bid opening to the time of Contract award, if a Bidder wishes to contact the Employer on any matter related to the bidding process, it shall do so in writing.

27 Clarification of Bids

27.1 To assist in the examination, evaluation, and comparison of the Bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its Bid, given a reasonable time for a response. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids, in accordance with ITB 31.

27.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its Bid may be rejected.

28 Deviations, Reservations and Omissions

28.1 During the evaluation of Bids, the following definitions apply:

- a) "Deviation" is a departure from the requirements specified in the Bidding Documents;
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and
- c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.

29 Determination of Responsiveness

29.1 The Employer's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in ITB 11.

29.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material Deviation, Reservation, or Omission. A material Deviation, Reservation, or Omission is one that,

- a) If accepted, would:
 - (i) Affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
 - (ii) Limit in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the Bidder's obligations under the proposed Contract; or
- b) If rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bid.

29.3 The Employer shall examine the technical aspects of the Bid submitted in accordance with ITB 16, in particular, to confirm that all requirements of Section VII - Works Requirements have been met without any material Deviation, Reservation or Omission.

29.4 If a Bid is not substantially responsive to the requirements of the Bidding Documents, it shall be rejected by the Employer and may not subsequently

- be made responsive by correction of the material Deviation, Reservation, or Omission.
- 30 Non-material Non-conformities**
- 30.1 Provided that a Bid is substantially responsive, the Employer may waive any non-material non-conformity (a non-conformity being a Deviation, Reservation or Omission) in the Bid.
- 30.2 Provided that a Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify non-material non-conformities in the Bid related to documentation requirements. Requesting information or documentation on such non-conformities shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.
- 30.3 Only for admeasurement contracts and provided that a Bid is substantially responsive, the Employer shall rectify quantifiable non-material non-conformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component.
- 31 Correction of Arithmetical Errors**
- 31.1 Provided that the Bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:
- a) Only for admeasurement contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;
 - b) Only for admeasurement contracts, if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless, only for admeasurement contracts, the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- 31.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 31.1 shall result in the rejection of the Bid.
- 32 Conversion to Single Currency**
- 32.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency **as specified in the BDS**.
- 33 Margin of preference**
- 33.1 **Unless otherwise specified in the BDS**, a margin of preference for domestic Bidders shall not apply.
- 34 Subcontractors**
- 34.1 **Unless otherwise stated in the BDS**, the Employer does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Employer (nominated subcontractors).
- 34.2 A "specialized subcontractor" is a subcontractor hired for specialized work as defined by the Employer in Section III - 4.2 Experience. If no specialized work is specified by the Employer as such, subcontractors experience shall not be considered for Bids evaluation.
- 34.3 In case of Prequalification, the Bidder's Bid shall name the same specialized subcontractor as submitted in the prequalification application and approved

by the Employer, or may name another specialized subcontractor meeting the requirements specified in the prequalification phase.

- 34.4 In case of Postqualification, the Employer may permit subcontracting for certain specialized works as indicated in Section III - 4.2 Experience. When sub-contracting is permitted by the Employer, the specialized subcontractor's experience shall be considered for the evaluation. Section III - Evaluation and Qualification Criteria, describes the qualification criteria for subcontractors.

35 Evaluation of Bids

- 35.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
- 35.2 To evaluate a Bid, the Employer shall consider the following:
- a) The Bid price, excluding Provisional Sums unless priced competitively and the provision, if any, for contingencies in the Schedules, but including Daywork items, where priced competitively;
 - b) Price adjustment for correction of arithmetic errors in accordance with ITB 31.1;
 - c) Price adjustment due to missing items, missing rates, or discounts offered in accordance with ITB 14.2 and 14.4;
 - d) Price adjustment due to quantifiable non-material non-conformities in accordance with ITB 30.3;
 - e) Converting the amount resulting from applying (a) to (d) above, if relevant, to a single currency in accordance with ITB 32;
 - f) The additional evaluation factors as specified in Section III - Evaluation and Qualification Criteria.
- 35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.
- 35.4 If these Bidding Documents allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Letter of Bid, is specified in Section III - Evaluation and Qualification Criteria.
- 35.5 If the Bid is seriously unbalanced or front loaded in the opinion of the Employer and after evaluation of the price analyses, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.
- 35.6 Only the qualifications of the Bidder shall be considered. In particular, the qualifications of a parent or other affiliated company that is not party to the Bidder under a JV in accordance with ITB 4.1 shall not be considered.
- 35.7 In case of multiple contracts, Bidders should indicate in their Bids the individual contracts in which they are interested. The Employer shall qualify each Bidder for the maximum combination of contracts for which the Bidder has thereby indicated its interest and for which the Bidder meets the appropriate aggregate requirements. The Qualification Criteria and Requirements are mentioned in Section III - Evaluation and Qualification Criteria.

- 36 Abnormally low Bid** 36.1 If the Bid, which results in the lowest Evaluated Bid Price, is twenty per cent (20%) or more, lower than the Employer's estimate, and unless the Employer provides justification that the estimate is inaccurate, the Employer shall require the Bidder to produce detailed price analyses for any or all items of the Schedules, to demonstrate the internal consistency of those prices and priced quantities with the construction methods, resources and schedule proposed, as well as the Works Requirements. Notwithstanding the provisions of ITB 14.2 which shall not be applicable, if one or several inconsistencies are evidenced, the Bid shall be declared non-compliant and rejected.
- 37 Qualification of the Bidder** 37.1 Any change in the structure or formation of a Bidder after being prequalified and invited to bid (including, in the case of a JV, any change in the structure or formation of any member thereto) shall be subject to the written approval of the Employer. Such approval shall be denied if (i) as a consequence of the change, the Bidder no longer substantially meets the prequalification criteria; or (ii) in the opinion of the Employer, the change may result in a substantial reduction in competition. Any such change should be submitted to the Employer not later than fourteen (14) days after the date of the Invitation for Bids.
- 37.2 The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive Bid either continues to meet (if prequalification applies) or meets (if postqualification applies) the qualifying criteria specified in Section III - Evaluation and Qualification Criteria.
- 37.3 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17.1.
- 37.4 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the Bid, in which event the Employer shall proceed to the next lowest evaluated Bid to make a similar determination of that Bidder's qualifications to perform satisfactorily.
- 38 Employer's Right to Reject all Bids** 38.1 The Employer reserves the right to annul the bidding process and reject all Bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all Bids submitted and specifically, Bid securities, shall be promptly returned to the Bidders.

F. Award of Contract

- 39 Award Criteria** 39.1 The Employer shall compare the evaluated prices of all substantially responsive Bids established in accordance with ITB 35.2 to determine the lowest evaluated Bid.
- 39.2 Subject to ITB 38.1, the Employer shall award the Contract to the Bidder whose Bid has been determined to be the lowest evaluated Bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
- 40 Notification of Award** 40.1 Prior to the expiration of the period of Bid validity, the Employer shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the "Letter of Acceptance") shall specify the sum that the Employer will pay the Contractor in consideration of the execution and completion of the Works and the requirement for the Contractor to remedy any defects therein (hereinafter and in the Conditions of Contract and

Contract Forms called the "Accepted Contract Amount"). At the same time, the Employer shall also notify all other Bidders of the results of the Bidding.

40.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

40.3 The Employer shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB 40.1, requests in writing the grounds on which its Bid was not selected.

40.4 In exceptional circumstances, a contract negotiation may be needed. In such case, the Employer shall send to the successful Bidder a letter of invitation to negotiate which should not be mistaken as a Letter of Acceptance which, under FIDIC Conditions of Contract, triggers contractual obligations from both Parties. The Letter of Acceptance shall be sent once the contract negotiation ends successfully. Minutes of negotiation meetings, and agreements reached therein, shall be attached to the Letter of Acceptance.

41 Signing of Contract

41.1 Promptly upon notification, the Employer shall send the successful Bidder the Contract Agreement.

41.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.

42 Performance Security

42.1 Within twenty-eight (28) days of the receipt of notification of award from the Employer, the successful Bidder shall furnish the performance security in accordance with the General Conditions of Contract, subject to ITB 36, using for that purpose the Performance Security Form included in Section X - Contract Forms, or another form acceptable to the Employer. If the performance security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Employer. A foreign institution providing a bond shall have a correspondent financial institution located in the Employer's Country.

42.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid security or execution of the Bid-Securing Declaration. In that event the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily.

Section II – Bid Data Sheet

A. Introduction	
ITB 1.1	The number of the Invitation for Bids is: AWWDA/AFD/NWSP/W-04B/2025
ITB 1.1	The Employer is: <i>The Chief Executive Officer, Athi Water Works Development Agency</i>
ITB 1.1	The name of the IPC is: This is a National Procurement Competition (NPC) Construction Works for Nairobi Informal Settlements Water and Sanitation Improvement Project – LOT 2 EASTERN NAIROBI WORKS The identification number of the NPC is: AWWDA/AFD/NWSP/W-04B/2025
ITB 2.1	The name of the Project is: <i>CKE1135-Nairobi Water and Sanitation Project</i>
ITB 4.5	This bidding process <i>is not</i> subject to prequalification
B. Bidding Documents	
ITB 7.1	For <u>clarification purposes</u> only, the Employer's address is: The Chief Executive Officer, Athi Water Works Development Agency, Athi Water Plaza, Muthaiga North Road, Off Kiambu Road P.O. Box 45283-00100 Nairobi, Kenya. Email: info@awwda.go.ke
ITB 7.4	A Pre-Bid meeting shall take place at the following date, time and place: Date: 4th June 2025 Time: 9:00 am East African Time Place: Athi Water Plaza , Muthaiga North Road off Kiambu Road. A Site visit conducted by the Employer shall be organized.
C. Preparation of Bids	
ITB 10.1	The language of the Bid is: English
ITB 13.1	Alternative Bids shall not be permitted.
ITB 13.2	Alternative technical solutions shall not be permitted for the parts of the Works specified in Section VII – Works Requirements..
ITB 13.5	Alternative times for completion of the Works shall not be permitted.
ITB 14.5	The price Adjustment is not applicable
ITB 15.1	The currency(ies) of the Bid and the payment currency(ies) shall be in accordance with Option A as described below: Bidders to quote entirely in local currency: a) The unit rates and the prices shall be quoted by the Bidder in the Schedules, entirely in Kenya Shillings , the name of the currency of the Employer's country, and further referred to as "the local currency".
ITB 18.1	The Bid Validity Period shall be 120 days.

ITB 18.3(a)	The Bid Price shall be adjusted as follows N/A
ITB 19.1	<p>A Bid Security <i>shall</i> be required. <u>Only an Unconditional On-Demand Bank Guarantee issued by a Bank operating in Kenya</u></p> <p>A Bid-Securing Declaration <i>shall not</i> be required.</p> <p>The amount and currency of the Bid security shall be: Kshs. 2,000,000 (Kenya Shillings Two Million)</p> <p><i>The Bid Security shall be valid for twenty-eight (28) days beyond the original validity period of the Bid, or beyond any period of extension if requested under ITB 18.2.</i></p>
ITB 19.3(d)	Other types of acceptable securities: None
ITB 20.1	In addition to the original of the Bid, the number of copies is: Three paper copies and one (1) digital copy (CD or flashdisk).
ITB 20.2	<p>The written confirmation of authorization to sign on behalf of the Bidder shall consist of:</p> <p>(a) <i>Documentation required to demonstrate the authority of the signatory to sign the Bid such as a “Sealed” Power of Attorney; and</i></p> <p>(b) <i>In the case of Bids submitted by an existing or intended JV an undertaking signed by all parties (i) stating that all parties shall be jointly and severally liable, if so required in accordance with ITB 4.1 and (ii) nominating a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution</i></p>
D. Submission and Opening of Bids	
ITB 22.1	<p>For <u>bid submission purposes</u> only, the Employer’s address is:</p> <p>The Chief Executive Officer, Athi Water Works Development Agency, Athi Water Plaza, Muthaiga North Road, Off Kiambu Road P.O. Box 45283-00100 Nairobi, Kenya.</p> <p>The deadline for bid submission is:</p> <p>Date: [30th July 2025]</p> <p>Time: [12:00 p.m. EAT]</p> <p>Bids must be deposited in the Tender Box located at Athi Water Plaza, Muthaiga North Road off Kiambu Road</p> <p>Bidders shall not have the option of submitting their bids electronically.</p>
ITB 25.1	<p>The Bid opening shall take place at:</p> <p>Address: Athi Water Works Development Agency, Athi Water Plaza, Muthaiga North Road, Off Kiambu Road</p> <p>City: Nairobi</p> <p>Country: Kenya</p> <p>Date: [30th July 2025]</p> <p>Time: [12:05 P.M EAT]</p>

	No minimum number of Bids is required in order to proceed to Bid opening.
E. Evaluation and Comparison of Bids	
ITB 32.1	The currency that shall be used for Bid evaluation and comparison purposes is: <i>Kenya Shilings</i> <i>The exchange rate shall be the CBK Selling rate at the date of 7 days before the bid submission deadline</i>
ITB 33.1	A margin of preference shall not apply.
ITB 34.1	At this time the Employer <i>does not intend</i> to execute certain specific parts of the Works by subcontractors selected in advance (nominated subcontractors).
ITB 35.2	Evaluation of Bids will be done on the basis of prices excluding VAT .

Section III – Evaluation and Qualification Criteria

This Section contains all the criteria that the Employer shall use to evaluate Bids and qualify Bidders. In accordance with ITB 35, 36 and ITB 37, no other factors, methods or criteria shall be used. The Bidder shall provide all the information requested in the forms included in Section IV - Bidding Forms.

1 Evaluation

In addition to the criteria listed in ITB 35.2 a) - e), the following criteria shall apply:

1.1 Assessment of adequacy of technical proposal with requirements:

The assessment of the technical proposal submitted by a Bidder shall comprise (a) evaluation of the Bidder's technical capacity to mobilize key equipment and key personnel to carry out the Works, (b) construction method, (c) construction schedule and (d) sufficiently detailed supply sources, in accordance with requirements specified in Section VII - Works Requirements.

If the environmental and social risks are evaluated as high and/or impacts as significant, and therefore, the Bidding Documents include ESHS Specifications, then the technical proposal shall comprise an ESHS Methodology. The ESHS Methodology submitted by the Bidder shall be evaluated to determine whether it is substantially responsive (i.e. without material deviation, reservation or omission) to the requirements specified in Section VII - Works Requirements - ESHS Specifications. The Bidder shall use the ESHS Methodology Form provided for this purpose in Section IV - Bidding Forms - Technical Proposal. ***A Bid not comprising an ESHS Methodology or a Bid for which the ESHS Methodology is not substantially responsive (i.e. with material deviation, reservation or omission) shall be rejected.***

1.2 Acceptability of the security methodology

When the security risks are assessed as high, and therefore, the Bidding Documents include security specifications in Section VII - Works Requirements, then the technical proposal shall comprise a security methodology, in accordance with ITB 11.1(i) of the Bid Data Sheet.

The security methodology shall be evaluated to determine whether each admissibility requirement specified in the security specifications is met. Otherwise, the Bid will be rejected.

1.3 Multiple Contracts, if permitted under ITB 35.4, will be evaluated as follow:

Not Applicable

1.4 Alternative Bids, if permitted under ITB 13.1, shall be evaluated as follows:

Not Applicable

1.5 Alternative Technical Solutions, if permitted under ITB 13.2, shall be evaluated as follows:

Not Applicable

1.6 Alternative Times for Completion of the Works, if permitted under ITB 13.5, shall be evaluated as follows:

Not Applicable

1.7 Personnel:

The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirements:

No.	Position	Requirements / Qualifications	Total work experience (years)	In similar works experience (years)
1	Project Manager	<ul style="list-style-type: none"> BSc. Civil Engineering; Registered with EBK or equivalent Engineering body; Proof of Fluency in Written and Spoken English. 	10	7
2	Site Agent	<ul style="list-style-type: none"> BSc. Civil Engineering Registered with EBK or equivalent Engineering body Proof of Fluency in Written and Spoken English Prior experience working in informal settlements 	8	6
4	Engineering Surveyors – One (1Nr)	BSc. Surveying or Higher National / Diploma in Surveying or equivalent	8	5
5	Foremen (Pipeline Works and Concrete Works) – Two (2 Nr)	Diploma in Civil Engineering / Building Construction or equivalent Prior experience working in informal settlements	10	5
6	Environmental and Social Expert	<ul style="list-style-type: none"> Degree in Environmental Science or sociology related field; Proof of Fluency in Written and Spoken Kiswahili. Experience of working in informal settlements 	5	4
7	Health and Safety Expert	<ul style="list-style-type: none"> Degree in Social Sciences Studies in Occupational Health / Community Development or equivalent Proof of Fluency in Written and Spoken Kiswahili Prior experience working in informal settlements 	5	4

The Bidder shall provide details of the proposed personnel and their experience records using Forms PER-1 and PER-2 included in Section IV - Bidding Forms.

1.8 Equipment:

The Bidder must demonstrate that it can obtain (purchase, lease or rent) the key equipment listed hereafter:

Required Equipment

No.	Equipment Type and Characteristics	Minimum Number Required
1.	HDPE pipe Butt fusion Machine (300mm pipe diameter and Less)	1
2.	Backhoe excavator	1
3.	7-10 -15 ton lorries/ tippers	2
4.	Concrete Mixers (> 2m ³ /hr)	1
5.	Air compressor (5,000 l/min)	3
6.	Dewatering pumps (capacity at least 15m ³ /hr at 20m head)	3
7.	Pick up vehicles – 4Wheel drive	2
8.	Survey Total Station Equipment	1
9.	Levelling machine	2
10.	Generators - >15kVA;	3

The Bidder shall provide further details of proposed items of equipment using Form EQU in Section IV - Bidding Forms.

Evidence on proof of ownership will be required.

2 Domestic Preference

N/A

3 Qualification3.1 Subcontractors:

The general experience and financial resources of the subcontractors shall not be added to those of the Bidder for purposes of qualification of the Bidder.

3.2 Update of Information in case of Prequalification:

Not applicable.

3.3 Qualification if no Prequalification has taken place:

Bidder to provide the information required in the attached Forms

Qualification Criteria

1. Eligibility						
Criterion	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
			All Parties Combined	Each Member	One Member	
1.1 Nationality	Nationality in accordance with ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI-1.1 and ELI-1.2, with attachments
1.2 Conflict of Interest	No conflicts of interest in accordance with ITB 4.2	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.3 AFD Eligibility	Not being ineligible to AFD financing, as described in ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Statement of Integrity (appendix to Letter of Bid)
1.4 State-Owned Entity	Meet conditions of ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI-1.1 and ELI-1.2, with attachments

2. Historical Contract Non-Performance						
Criterion	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
			All Parties Combined	Each Member	One Member	
2.1 History of Non-Performing Contracts	Termination of a contract ¹ did not occur as a result of Bidder's default in the past five (5) years.	Must meet requirement ² .	Must meet requirement	Must meet requirement ²	N/A	Form CON-2

¹ Non-performance shall include all terminations of contracts where (a) non-performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non-performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism.

² This requirement also applies to contracts executed by the Bidder as JV member.

2. Historical Contract Non-Performance							
Criterion		Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
2.2	Suspension Based on Execution of Bid Securing Declaration by the Employer	Not under suspension based on execution of a Bid Securing Declaration pursuant to ITB 4.4.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
2.3	Pending Litigation	All pending litigation shall in total not represent more than one hundred percent (100%) of the Bidder’s net worth and shall be treated as resolved against the Bidder.	Must meet requirement	N/A	Must meet requirement	N/A	Form CON-2

3. Financial Situation and Performance						
Criterion	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
			All Parties Combined	Each Member	One Member	
3.1 Financial Capabilities	(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as KES 100,000,000.00 (KES One Hundred Million) for the subject contract(s) net of the Bidder's other commitments	Must meet requirement	Must meet requirement	N/A	N/A	Forms FIN-3.1 and FIN-3.3
	(ii) The Bidder shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments	Must meet requirement	Must meet requirement	N/A	N/A	Forms FIN-3.1 and FIN-3.4
	(iii) The audited balance sheets or, if not required by the laws of the Bidder's country, other financial statements acceptable to the Employer, for the last three (3) years shall be submitted and must demonstrate the current soundness of the Bidder's financial position. The Bidder's financial position will be deemed sound if at least two (2) of the following four (4) criteria are met: a) Average earnings before interest, taxes, depreciation,	Must meet requirement	N/A	N/A	Leader must meet requirement	Form FIN-3.1, with attachments

3. Financial Situation and Performance						
Criterion	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
			All Parties Combined	Each Member	One Member	
	<p>and amortization (EBITDA) for the last three (3) years > 0;</p> <p>b) Total equity (net worth) for the last three (3) years > 0;</p> <p>c) Average liquidity ratio for the last three (3) years > 1 ((Current assets) / (Current liabilities) > 1);</p> <p>d) Average indebtedness ratio for the last three (3) years < 6 ((Total financial liabilities) / (EBITDA) < 6).</p>					
3.2 Minimum Annual Turnover	Minimum average annual turnover of KES 200,000 000.00 (Kenya Shiling Two Hundred Million) for the last 3 years.	Must meet requirement	Must meet requirement	Must meet twenty five per cent 25% of the requirement	Must meet forty 40% per cent 40% of the requirement	Form FIN-3.2

4. Experience						
Criterion	Requirements	Single Entity	Joint Venture (existing or intended)			Submission Requirements
			All Parties Combined	Each Member	One Member	
4.1 General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, subcontractor, or management contractor for at least the last 5 years , starting 1st January 2020	Must meet requirement	N/A	Must meet requirement	N/A	Form EXP-4.1
4.2 (a) Specific Construction & Contract Management Experience	(i) A minimum number of similar ³ contracts specified below that have been satisfactorily and substantially ⁴ completed as a prime contractor, joint venture member ⁵ , management contractor or subcontractor between 1st January 2020 and application submission deadline: Must have undertaken at least One (1) water and sewerage project of minimum amount of KES. 240, 000,000 within the last 5 years specifically in the informal settlements in Kenya (See Note 4)	Must meet requirement	Must meet requirement ⁶	N/A	N/A	Form EXP-4.2(a)
4.2 (b) Specific Experience	For the above and any other contracts completed and under implementation as prime contractor, joint venture member, management contractor or subcontractor ⁷ on or after the first day of the calendar year during the period stipulated in 4.2 (a) above,	Must meet requirement	Must meet requirement	N/A	Must meet the following requirements for the key activities listed below <i>[list key activities]</i>	Form EXP-4.2(b)

³ The similarity shall be based on the physical size, complexity and technicity of the Works. Adding up small value contracts (less than the value specified under requirement) to meet the overall requirement will not be accepted.

⁴ Substantial completion shall be based on 80% or more works completed under the contract.

⁵ For contracts under which the Bidder participated as a joint venture member or subcontractor, only the Bidder's share, by value, shall be considered to meet this requirement.

⁶ In the case of a JV, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. For instance, if the criterion mentions "two (2) contracts with a minimum value of 50M\$ each", a JV composed of 3 members and having carried out four (4) contracts of 30M\$ each shall not be qualified. On the other hand, if 2 of the 3 members of the JV each carried out one (1) contract of 50M\$, the criterion is met, even if the third member does not have any contract of this value.

⁷ For contracts under which the Bidder participated as a joint venture member or subcontractor, only the Bidder's share shall be counted to meet this requirement.

4. Experience						
Criterion	Requirements	Single Entity	Joint Venture (existing or intended)			Submission Requirements
			All Parties Combined	Each Member	One Member	
	<p>a minimum construction experience in the following key activities successfully completed⁸:</p> <ul style="list-style-type: none"> i. Concrete works of rate of at least 10m³/month; ii. Sewer pipework greater than DN 225mm at an output rate of 500 m per month; iii. Water pipelines greater than DN 110 at 1km per month iv. Construction of ablution blocks, water kiosks of similar works v. Connections to water and sewer facilities 				<i>and the corresponding minimum requirements]</i>	

⁸ For example, experience of works while in operation may be required under this criterion. Volume, number or rate of production of any key activity can be demonstrated in one or more contracts combined if executed during same time period. The rate of production shall be the annual production rate for the key construction activity (or activities).

5. Environmental, Social, Health and Safety (ESHS)						
Criterion	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
			All Parties Combined	Each Member	One Member	
5.1 ESHS Certification(s)	Availability of a valid ISO certification or internationally recognized equivalent (equivalency to be demonstrated by Bidder), and applicable to the worksite:	Must meet requirement	N/A	N/A	Leader must meet requirement	Form CER
	Quality management certificate ISO 9001;	N/A	N/A	N/A		
	Environmental management certificate ISO 14001	N/A	N/A	N/A		
	Health and safety management certificate ISO 45001	N/A	N/A	N/A		
	<input checked="" type="checkbox"/> OSHA Certification – workplace registration	Must meet requirement	N/A	N/A	Leader must meet requirement	Form CER
5.2 ESHS Documentation	<p>Availability of in house policies and procedures acceptable to the Employer for ESHS management:</p> <ol style="list-style-type: none"> Existence of an Ethics Charter; Existence of a system for monitoring compliance with ESHS commitments for the Bidder's subcontractors and all its partners; Existence of official company procedures for the management of the following relevant points: 	Must meet requirement	N/A	N/A	Leader must meet requirement	<ol style="list-style-type: none"> The ESHS Ethics Charter of the company or equivalent must be provided. A procedure or information on how the Bidder ensures that all members of the Joint Venture, subcontractors, suppliers and temporary labor (i) are aware and (ii) meet ESHS requirements must be provided. Official internal procedure documents on the topics indicated must be provided.

5. Environmental, Social, Health and Safety (ESHS)						
Criterion	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
			All Parties Combined	Each Member	One Member	
	<input checked="" type="checkbox"/> ESHS resources and facilities and ESHS monitoring organization; <input checked="" type="checkbox"/> Health & Safety on worksites; <input checked="" type="checkbox"/> Relations with stakeholders, information and consultation of local communities and authorities; <input checked="" type="checkbox"/> Site rehabilitation and revegetation; <input checked="" type="checkbox"/> Control of infectious and communicable diseases (HIV/AIDS, malaria, etc.).					
5.3 Similar Experience	Experience of One (1) construction contracts over the last Five (5) years, in Kenya where major ESHS measures were carried out or are on progress satisfactorily and in compliance with international standards.	Must meet requirement	N/A	N/A	Leader must meet requirement	Form EXP-ESHS with supporting documents (the Bidder shall submit a piece of evidence supporting the ESHS implementation measures)

5. Environmental, Social, Health and Safety (ESHS)							
Criterion	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements	
			All Parties Combined	Each Member	One Member		
5.4 Specific ESHS Knowledge Transfer Experience	Experience of one (1) construction contract in Kenya over the last five (5) years in which the ESHS knowledge transfer to a local partner or the ESHS capacity building of the Employer’s country staff was carried out satisfactorily	Must meet requirement	N/A	N/A	Leader must meet requirement	Form EXP-ESHS with supporting documents (The Bidder shall submit a piece of evidence supporting the ESHS knowledge transfer or capacity building)	
5.5 ESHS Dedicated Personnel	Availability of in-house personnel dedicated to ESHS issues: Environmental and Social Manager, and/or Health and Safety Manager.	Must meet requirement	N/A	N/A	Leader must meet requirement	Organizational chart evidencing filled ESHS position(s) (The Bidder shall also submit a CV of the lead ESHS Personnel)	

6. Security							
Criterion	Requirement	Single Entity	Joint Venture (existing or intended)			Documentation Required	
			All Parties Combined	Each Member ⁹	One Member		
6.1 Specific experience in areas with security risks	Experience of One (1) contract involving a presence in the country and completed within the last ten (10) years in an area with a similar security risk requiring the implementation of a security plan	Must meet requirement	N/A	Must meet requirement	Leader must meet requirement	Form EXP-4.2(b): for each experience listed, the security plan, as well as proof of the implementation of security measures must be provided ¹⁰	
6.2 Security documentation	Having internal security management procedures and systems for business trips and on worksites	Must meet requirement	N/A	Must meet requirement	Leader must meet requirement	Supply of the following documents acceptable to the Employer: — Description of the monitoring and alert system — Crisis management procedure	
6.3 Repatriation	Subscription to an emergency repatriation assistance contract	Must meet requirement	N/A	Must meet requirement	Leader must meet requirement	Furnish a certificate from the company that will provide repatriation services	
6.4 Security preparation	Existence and implementation of procedures and tools for preparing employees likely to work or who are working in areas with security risks	Must meet requirement	N/A	Must meet requirement	Leader must meet requirement	Procedures and preparation tools provided at the time of departure with proof of implementation (proof of awareness-raising or training actions carried out)	
6.5 Dedicated security personnel	Availability of personnel dedicated to security issues: security officer or equivalent with a minimum of two (2) years of relevant experience within the last Five (5) years	Must meet requirement	N/A	N/A	Leader must meet requirement	Organisational chart highlighting a filled position dedicated to security and the security officer’s CV	

⁹ [With the exception of companies that have their registered office in the country of the Employer (except the Leader of the JV, which must meet each of the criteria).]

¹⁰ [Proof of acceptable implementation: contract or certification of a contract with security companies, proof of security training before departure on-site, security service provider invoices, proof of crisis simulation tests or an audit of the security plan.]

Section IV – Bidding Forms

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Letter of Bid

[The Bidder shall prepare his Letter of Bid on a Letterhead paper specifying his name and address.]

Date: _____

IPC No.: AWWDA/AFD/NWSP/W-04B/2023

To: **The Chief Executive Officer**
Athi Water Works Development Agency
Athi Water Plaza, Muthaiga North Road, Off Kiambu Road
P.O Box 45283 – 00100 Nairobi, Kenya

We, the undersigned, declare that:

- a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB 8);
- b) We have no conflict of interest in accordance with ITB 4.2;
- c) We have not been suspended nor declared ineligible by the Employer based on execution of a Bid Securing Declaration in the Employer's country in accordance with ITB 4.4;
- d) We offer to execute in conformity with the Bidding Documents the following works: **Construction Works For Water and Sanitation in the Informal Settlements in Nairobi – Lot 2-Eastern Nairobi Works**
- e) The total price of our Bid, excluding VAT and excluding any discounts offered in item (f) below is:
 - (i) In case of only one lot, total price (excluding VAT) of the Bid: **Kshs.** ;
 - (ii) The total amount of VAT is: Kshs. ;
 - (iii) The total bid price including VAT is: Kshs. _____.
- f) The discounts offered and the methodology for their application are:
 - (i) The discounts offered are: ;
 - (ii) The exact method of calculations to determine the net price after application of discounts is shown below: .
- g) Our Bid shall be valid for a period of **120** days from the date fixed for the Bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- h) If our Bid is accepted, we commit to obtain a performance security in accordance with ITB 43 of the Bidding Documents;
- i) We are not participating, as a Bidder, in more than one Bid in this bidding process in accordance with ITB 4.2(e), other than alternative Bids submitted in accordance with ITB 13;
- j) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- k) We acknowledge and agree that the Employer reserves the right to annul the bidding process and reject all Bids at any time prior to contract award without thereby incurring any liability to us; and
- l) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption.

Name of the Bidder¹: _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder²: _____

Title of the person signing the Bid: _____

Signature of the person named above: _____

Date signed: _____ day of: _____

¹ In the case of the Bid submitted by a JV specify the name of the JV as Bidder.

² Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid.

Appendix 1 to Bid – Schedule of Adjustment Data

Table of Weightings

Factor of description	Range of Values permitted (1)	Weightings for each payment currency (2)		Total (3)
		(national currency)	(foreign currency: € or US\$)	
X Non Adjustable	0.2			0.2
(a) Labour	0.05 – 0.1			
(b) Cement / Cement based materials	0.05 – 0.1			
(c) Plastic pipes, fittings, appertenances including reinforcement	0.35 – 0.55			
(d) Fuel and fuel based materials	0.1 – 0.35			
Total				1.00

The Bidder shall indicate in Columns (2) the specific weightings for each factor and Bid currency, and in Column (3) the sub-totals for each factor, which must be within the range specified by the Employer in Column (1), respectively; furthermore, the sum of the sub-totals in Column (3) must be equal to 1 (one).

A formula shall be used for each payment currency, to be derived from the above Table as follows: the weightings to be used in each formula will be derived from the values in each currency column, respectively, by dividing each individual value by the sum of the values in the given column.

Table A: National Currency

Index Code	Index Description/ Identification	Publication Source for the Index	Base Value in [month] ¹
(L)	Labour	KNBS	
(C)	Cement / Cement based materials	KNBS	
(F)	Plastic pipes and materials (Inc fittings, valves, meters etc)	KNBS	
(S)	Ferrous materials (incl. pipes, fittings, reinforcement steel)	Metal Bulletin	
(F)	Fuel and fuel based materials	ERC	

Sources of Indices

KNBS	–	Kenya National Bureau of Statistics (KNBS) Construction Cost Index or equivalent approved source of Index
Metal Bulletin	–	Appropriate Index for Ferrous Materials to be selected from the appropriate category of the Metal Bulletin depending on the Country / Region of origin of the goods or equivalent approved source of Index.
ERC	-	Ex Mombasa Depot Price published monthly by the Energy Regulatory Commission (ERC) or equivalent approved source of Index

¹ Insert the month of the Base Date, i.e. the month of the Deadline for Bid Submission in accordance with ITB Clause 22.

Example:

The following example shows a table of weightings and the corresponding price adjustment formula which are derived from it, on the basis of the following assumptions:

- Three weightings/factors are shown in this example: X is the non-adjustable portion and two adjustment factors (a and b) contribute to price adjustment through the variation of Indices T and S respectively, for which the respective ranges permitted by the Employer and values selected by the Bidder are shown in the table; these values are to be used in the price adjustment formula.
- Two payment currencies are shown in this example: the national currency (l) and a foreign currency (f), the indices T and S are the respective indices in the country of the currency.
- The data in bold are those specified by the Employer in the Bidding Documents, whereas the other data are provided either by the Bidder in its Bid or by the Contractor in the payment request.

Factor and Description	Range of Values permitted	Weightings for each payment currency		Totals
		n	e	
X	0,15	0,05	0,10	0,15
a	0,30 - 0,50	0,15	0,25	0,40
b	0,25 - 0,45	0,20	0,25	0,45
Totals		0,40	0,60	1,00

Formula to be used for calculation of adjustment of payments:

$$\text{Payment in national currency (n): } P_{ln} = \frac{0,05}{0,40} + \frac{0,15}{0,40} \frac{T_{ln}}{T_{lo}} + \frac{0,20}{0,40} \frac{S_{ln}}{S_{lo}}$$

$$\text{Payment in foreign currency (f): } P_{fn} = \frac{0,10}{0,60} + \frac{0,25}{0,60} \frac{T_{fn}}{T_{fo}} + \frac{0,25}{0,60} \frac{S_{fn}}{S_{fo}}$$

Appendix 2 to Bid - Summary of Payment Currencies

For the Whole Works

Name of payment currency	A) Amount of currency	B) Rate of exchange (local currency per unit of foreign	C) Local currency equivalent (C = A x B)	D) Percentage of Total Bid Price ($\frac{100 \times C}{TPB}$)
Local currency: Kenya Shillings		1.00		
Total Bid Price including Provisional Sums (Exclusive of VAT)				100.00

**Bidder to enter Exchange Rate applicable 14 days before the deadline of submission of bids

Note:

- i. Amounts to be indicated in the Table above are portions of the Bid Price Exclusive of Value Added Tax (VAT)
- ii. The VAT component of all payments under the Contract shall be paid in the Local Currency, Kenya Shillings.

Appendix 3 to Bid - Statement of Integrity, Eligibility and Environmental and Social Responsibility

Reference of the bid or proposal *for Construction Works for Water and Sanitation in the Informal Settlements in Nairobi project- Lot 2-Eastern Nairobi Works* (AWWDA/AFD/NWSP/W-04B/2023)

To: *The Chief Executive Officer, Athi Water Works Development Agency, P.O. Box 45283 - 00100, Nairobi, Kenya* (the "Contracting Authority")

1. We recognize and accept that *Agence Française de Développement* ("AFD") only finances projects of the Contracting Authority subject to its own conditions which are set out in the Financing Agreement which benefits directly or indirectly to the Contracting Authority. As a matter of consequence, no legal relationship exists between AFD and our company, our joint venture or our suppliers, contractors, subcontractors, consultants or subconsultants. The Contracting Authority retains exclusive responsibility for the preparation and implementation of the procurement process and performance of the contract. The Contracting Authority means the Purchaser, the Employer, the Client, as the case may be, for the procurement of goods, works, plants, consulting services or non-consulting services.
2. We hereby certify that neither we nor any other member of our joint venture or any of our suppliers, contractors, subcontractors, consultants or subconsultants are in any of the following situations:
 - 2.1 Being bankrupt, wound up or ceasing our activities, having our activities administered by the courts, having entered into receivership, reorganisation or being in any analogous situation arising from any similar procedure;
 - 2.2 Having been:
 - a) convicted, within the past five years by a court decision, which has the force of *res judicata* in the country where the Contract is implemented, of fraud, corruption or of any other offense committed during a procurement process or performance of a contract (in the event of such conviction, you may attach to this Statement of Integrity supporting information showing that this conviction is not relevant in the context of this Contract);
 - b) subject to an administrative sanction within the past five years by the European Union or by the competent authorities of the country where we are constituted, for fraud, corruption or for any other offense committed during a procurement process or performance of a contract (in the event of such sanction, you may attach to this Statement of Integrity supporting information showing that this sanction is not relevant in the context of this Contract);
 - c) convicted, within the past five years by a court decision, which has the force of *res judicata*, of fraud, corruption or of any other offense committed during the procurement process or performance of an AFD-financed contract;
 - 2.3 Being listed for financial sanctions by the United Nations, the European Union and/or France for the purposes of fight-against-terrorist financing or threat to international peace and security;
 - 2.4 Having been subject within the past five years to a contract termination fully settled against us for significant or persistent failure to comply with our contractual obligations during contract performance, unless this termination was challenged and dispute resolution is still pending or has not confirmed a full settlement against us;
 - 2.5 Not having fulfilled our fiscal obligations regarding payments of taxes in accordance with the legal provisions of either the country where we are constituted or the Contracting Authority's country;
 - 2.6 Being subject to an exclusion decision of the World Bank and being listed on the website <http://www.worldbank.org/debarr> (in the event of such exclusion, you may attach to this Statement of Integrity supporting information showing that this exclusion is not relevant in the context of this Contract);
 - 2.7 Having created false documents or committed misrepresentation in documentation requested by the Contracting Authority as part of the procurement process of this Contract.
3. We hereby certify that neither we, nor any of the members of our joint venture or any of our suppliers, contractors, subcontractors, consultants or subconsultants are in any of the following situations of conflict of interest:
 - 3.1 Being an affiliate controlled by the Contracting Authority or a shareholder controlling the Contracting Authority, unless the stemming conflict of interest has been brought to the attention of AFD and resolved to its satisfaction;
 - 3.2 Having a business or family relationship with a Contracting Authority's staff involved in the procurement process or the supervision of the resulting Contract, unless the stemming conflict of interest has been brought to the attention of AFD and resolved to its satisfaction;
 - 3.3 Being controlled by or controlling another bidder or consultant, or being under common control with another bidder or consultant, or receiving from or granting subsidies directly or indirectly to another bidder or consultant, having the same legal representative as another bidder or consultant, maintaining direct or indirect contacts with

- another bidder or consultant which allows us to have or give access to information contained in the respective applications, bids or proposals, influencing them or influencing decisions of the Contracting Authority;
- 3.4 Being engaged in a consulting services activity, which, by its nature, may be in conflict with the assignments that we would carry out for the Contracting Authority;
- 3.5 In the case of procurement of goods, works or plants:
- a) Having prepared or having been associated with a consultant who prepared specifications, drawings, calculations and other documentation to be used in the procurement process of this Contract;
 - b) Having been recruited (or being proposed to be recruited) ourselves or any of our affiliates, to carry out works supervision or inspection for this Contract.
4. If we are a state-owned entity, and to compete in a procurement process, we certify that we have legal and financial autonomy and that we operate under commercial laws and regulations.
5. We undertake to bring to the attention of the Contracting Authority, which will inform AFD, any change in situation with regard to points 2 to 4 here above.
6. In the context of the procurement process and performance of the corresponding contract:
- 6.1 We have not and we will not engage in any dishonest conduct (act or omission) deliberately intended to deceive others, to intentionally conceal items, to violate or vitiate someone's consent, to make them circumvent legal or regulatory requirements and/or to violate their internal rules in order to obtain illegitimate profit;
 - 6.2 We have not and we will not engage in any dishonest conduct (act or omission) contrary to our legal or regulatory obligations or our internal rules in order to obtain illegitimate profit;
 - 6.3 We have not promised, offered or given and we will not promise, offer or give, directly or indirectly to (i) any Person who holds a legislative, executive, administrative or judicial mandate within the State of the Contracting Authority regardless of whether that Person was nominated or elected, regardless of the permanent or temporary, paid or unpaid nature of the position and regardless of the hierarchical level the Person occupies, (ii) any other Person who performs a public function, including for a State institution or a State-owned company, or who provides a public service, or (iii) any other person defined as a Public Officer by the national laws of the Contracting Authority's country, an undue advantage of any kind, for himself or for another Person or entity, for such Public Officer to act or refrain from acting in his official capacity;
 - 6.4 We have not promised, offered or given and we will not promise, offer or give, directly or indirectly to any Person who occupies an executive position in a private sector entity or works for such an entity, regardless of the nature of his/her capacity, any undue advantage of any kind, for himself or another Person or entity for such Person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations;
 - 6.5 We have not and we will not engage in any practice likely to influence the contract award process to the detriment of the Contracting Authority and, in particular, in any anti-competitive practice having for object or for effect to prevent, restrict or distort competition, namely by limiting access to the market or the free exercise of competition by other undertakings;
 - 6.6 Neither we nor any of the members of our joint venture or any of our suppliers, contractors, subcontractors, consultants or subconsultants shall acquire or supply any equipment nor operate in any sectors under an embargo of the United Nations, the European Union or France;
 - 6.7 We commit ourselves to comply with and ensure that all of our suppliers, contractors, subcontractors, consultants or subconsultants comply with international environmental and labour standards, consistent with laws and regulations applicable in the country of implementation of the Contract, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties. Moreover, we shall implement environmental and social risks mitigation measures when specified in the environmental and social commitment plan (ESCP) provided by the Contracting Authority.
7. We, as well as members of our joint venture and our suppliers, contractors, subcontractors, consultants or subconsultants authorise AFD to inspect accounts, records and other documents relating to the procurement process and performance of the contract and to have them audited by auditors appointed by AFD.

Name: _____ In the capacity of: _____

Duly empowered to sign in the name and on behalf of¹⁴: _____

Signature: _____

Dated: _____

¹⁴ In case of joint venture, insert the name of the joint venture. The person who will sign the application, bid or proposal on behalf of the applicant, bidder or consultant shall attach a power of attorney from the applicant, bidder or consultant.

Schedules

Bill of Quantities

Rates and prices in the Bills of Quantities shall exclude VAT. The VAT estimate will be indicated as a separate amount in the Grand Summary. Information on applicable tax exemptions is provided in Sub-Clause 14.1 (b) of the Particular Conditions of Contract.

The Bills of Quantities must be prepared in Kenya Shillings as per BDS – ITB 15.1.

The Schedule of Bills of Quantities is given below:

Bill No.	Bill Description
Section 1	Preliminaries & General
Section 2	Mji wa Huruma
Bill No. 2.1	Water Component : Supplying and Laying 1.4 Km of Water pipeline. 1 Borehole Rehabilitation
Bill No. 2.1	Construction of 1 new ablution block. Rehabilitation of Biodigesters
Section 3	Matopeni
Section 3.1	Water Component : Supplying and Laying 4Km of Water Distribution pipeline. 50 No. Water last mile connections
Bill No. 3.2	Sanitation Component : Supply and Laying of 1.6km sewer extension lines and 50 No. sewer last mile connections
Section 4	Mariguini
Bill No. 4.1	Water Component : Supply and Laying of 1.2KM Water Pipelines and Rehabilitation of 3 water Kiosks. Construction of 3PPDs
Bill No. 4.2	Sanitation Component: Supply and Laying of 1.8km sewer extension lines, Reconstruction of 1no. Ablution Block
Section 5	Kamola
Bill No. 5.1	Water Component : Supply and Installation of 2No PPD
Bill No. 5.2	Sanitation Component: Supply and Laying of 300m sewer extension lines, Rehabilitation of sewer connections to the existing ablution blocks.
Section 6	Kiambiu
Bill 6.1	Water Component: Supplying and Laying 3.7Km of Water Distribution pipeline. 100 No. Water last mile connections. Installation of 29 PPDS

PREAMBLE AND NOTES TO BILLS OF QUANTITIES

1. These Bills of Quantities form part of the Contract Documents and are to be read in conjunction with the Conditions of Contract, Standard and Special Specifications and Drawings. The Particular Specifications overrides any Clauses / General Specifications given in the Preamble.
2. Whenever reference is made to “The Engineer” or “The Engineer’s Representative” in the Bills of Quantities, it shall be construed to mean the person appointed by the Employer to act as the Project Manager or Engineer for the purposes of the Contract and named in the Contract Data, or other person appointed from time to time by the Employer and notified to the Contractor.
3. The quantities set forth in the Bills of Quantities represent the character of the work to be carried out. There is no guarantee to the Contractor that he will be required to carry out the quantities of work indicated under any one particular item or group of items in the Bills of Quantities. Though on the Contract as a whole, the quantities are intended to represent the overall value of the work to be carried out.
4. The prices and rates inserted in the Bills of Quantities will be used for valuing the work executed and the Engineer will measure the whole of the works executed in accordance with the Contract.
5. The prices and rates inserted in the Bills of Quantities are to be the full inclusive costs of the works described under the items, complete in place and in accordance with the Specifications and Drawings, including setting out of the works, including costs and expenses which may be required in and for the construction of the works described, together with any temporary works and installations which may be necessary and all general risks, liabilities and obligations set forth or implied in the Documents on which the Contract is based.
6. The brief description of the items given in the Bills of Quantities are purely for the purpose of identification and in no way modify or supersede the detailed descriptions given in the Conditions of Contract, Specifications or Drawings. When pricing items, reference is to be made to the Conditions of Contract, Standard Specifications, Drawings and Special Specification for the full directions and description of work and materials.
7. A price or rate is to be inserted, in ink, against each item in the Bills of Quantities, whether quantities are stated or not, and if the Bidder includes the cost of a particular item elsewhere in his rates or prices, he shall insert the word "nil" against both the rate and extension of that particular item. Should the Bidder omit to price an item, then it will be assumed that he has included the cost of the item elsewhere in his rates or prices.
8. No alteration shall be made to the Bills of Quantities and no extra item shall be inserted. The Bidder shall satisfy himself that the Contract Sum arrived at by pricing the quantities and items given is sufficient compensation for constructing and maintaining the whole of the works in accordance with the Contract Documents.
9. For the purpose of payment by Interim Certificate of "Lump Sum" items the Engineer may assess the portion of the work completed on the "Lump Sum" item and allow for payment of the portion of the "Lump Sum" he deems fair and reasonable. The total of all portions allowed shall not exceed the "Lump Sum". All interim payments shall be subject to the retention stipulated in the Contract Documents.
10. During construction, the unit rate established for an item in one Bill of Quantities may be used as a basis for establishing a unit rate for similar work in another Bill of Quantities which contains no such item. No additional cost will be considered for such an eventuality.
11. The Contractor will be provided by the Employer with all that land occupied by the Permanent Works including the specified working width for pipe laying and other permanent construction works. The costs of compensation and entry upon land (if any) for the specified working width will be paid by the Employer. All other costs for temporary access to the works or additional working space shall be borne by the Contractor.
12. All costs related to strict adherence to all Health and Safety regulations stipulated in the National Legislation of Kenya as well acceptable international good practices for both temporary and permanent works pertaining to nature of the works under this Contract, shall be deemed included in the Contractor’s rates.
13. It shall be the responsibility of the Contractor to arrange for the removal of, or alteration to existing services where necessitated by the Works. Costs incurred will be paid under relevant items in the Bills of Quantities.
14. Quantities for site clearance, stripping and spreading shall be based on plan area cleared or stripped.
15. The rates for excavation items shall be deemed to include inter alia for setting aside spoil for reuse in the Works or disposing to approved tips identified by the Contractor in liaison with the Local Authority and approved by the Engineer, except where otherwise provided for in the Bills of Quantities.

16. Generally, excavation items are based on volumes for structures and on linear measurements for certain pipelines. The work may be covered by one or more items. The rates shall include as appropriate for:-
- Breaking through surfaces, handling different classes of material separately; excavation beyond the net plan area of the foundations, for safe working space and for battering or timbering etc.
 - Timbering
 - Dealing with water from any source whatsoever
 - Backfilling as specified
 - Disposal of surplus spoil

Measurement of volume of excavation for structures shall be calculated from the plan dimensions of the structure without allowance for working space.

The depth of excavation in pipe trenches will be measured from stripped ground level to the invert of the pipe. Measurement for other excavations will be to the size which is required to accommodate the permanent works. A Bidder shall accordingly allow in his prices for any amount of extra excavation, which may be necessary for safe working space to complete the work to the satisfaction of the Engineer.

Items are included for "Extra Over for Rock" on a volume basis and within the specified trench dimensions. The rates shall include for breaking out, mucking and disposal by method(s) approved by the Engineer and any other additional costs for other works or special methods adopted for excavation and disposal by the Contractor, encountered within measured excavation.

Different rock classifications are defined in the Specifications and have been billed separately. Rock shall be measured as a volume calculated from the thickness encountered within the plan area of a mass excavation, within the plan dimensions of a structure, or within the nominal width of a trench. The decision of the Engineer on the classification of rock encountered in excavation shall be final and binding. **Note: Any excavation of murram in whatever form will be taken as common excavation.**

Timbering left in excavations shall only be measured for payment where it is specified or ordered by the Engineer.

17. Excavation by mechanical equipment may not be possible in some area due to restricted wayleaves, slopes/topographical features, ground water from whatsoever source, existing structures, drains, roads, trees, fences, walls, etc. The Contractor's rates for pipe trench excavation shall be deemed to cover mechanical and/or manual excavation. No claim for restricted space or double haulage will be entertained.

The Contractor shall indemnify the Employer against all claims for damage which in opinion of the Engineer may be caused by Excavation. This includes reinstatement of road surfaces, drains, fences, wall, culverts, etc., all in accordance to relevant authority.

18. When the site of any particular item of the Works has been sufficiently cleared of trees, undergrowth etc. and before any excavation or filling has been carried out, the Contractor shall carry out a survey under the Supervision of the Engineer's Representative to take, record and agree upon an adequate number of original ground levels. The data so obtained shall be used as a basis for the computation of excavation and filling and preparation of "As-Built" Drawings by the Contractor. If for whatever reason the Contractor commences excavation without taking levels, the Engineer's decision on the original ground levels to be used for computation will be final.

19. The volume of fill will be measured net to the finished levels as shown on drawings or as amended by the Engineer.

20. **METHOD RELATED CHARGES**

- In order that the Contractor may cover his cost in executing specific portions of work, where those costs are not properly attributable to the quality of permanent works to be executed, he may cover such costs in the Bills of Quantities in accordance with the following provisions.
- For the purpose of these charges the following words and expressions shall have the meaning hereby assigned to them.
 - 'Method Related Charge' means the sum for an item inserted in the Bills of Quantities by a Bidder in accordance with paragraph 20 c).
 - 'Time Related Charge' means a Method Related Charge for work the cost of which is to be considered as proportional to the length of time taken to execute the work.
 - 'Fixed Charge' means a Method Related Charge which is not a Time Related Charge.

- c) A Bidder may insert in the Bills of Quantities, in the Bill provided, such items for Method Related Charges as he may decide to cover items of work relating to his intended method of executing the works, the costs of which are not to be considered as proportional to the quantities, rates and prices for the other items.
- d) Each item for a Method Related Charge inserted by the Bidder shall be fully described so as to define precisely the extent of work covered and to identify the constructional resources (plant, equipment, etc.) to be used and particular items of permanent or temporary works to which the items relate. The description shall include the type of charge (Time Related or Fixed) and in the case of a Time Related Charge, shall include also the expected duration, and the rate of charge.
- e) The insertion by a Bidder of an item for a Method Related Charge in the Bills of Quantities shall not bind him to adopt the method stated in the description of the item. However, in the case of a Time Related Charge, where the method is changed, a revised rate of charge shall be used taking account of the revised execution period to give the same total charge, had the original method, time and charge rate been adhered to.

If the charge is a Fixed Charge then payment to the Contractor for such an item shall be in equal installments spread evenly throughout the duration of that part of the works which is the subject of the Fixed Charge.

- f) Method Related Charges shall not be admeasured but shall be deemed to be prices for the purpose of Clauses 36 of the Conditions of Contract and shall be paid in accordance with Clause 40.4 of the Conditions of Contract.
- g) In the event of the satisfactory execution of any part of the works which has been the subject of an item for a Method Related Charge using, whether in whole or in part, a method other than that described in the item, the Contractor shall nevertheless be entitled to payment of the Method Related Charge or the balance thereof, as the case may be, such instalments at such times and upon such events as may from time to time be agreed between the Engineer and the Contractor. In default of such agreement the Method Related Charge, or the balance then unpaid, shall be allowed to the Contractor by way of instalments in interim certificates at such times and upon such events as the Engineer shall decide.
The amount of Method Related Charge shall be neither increased nor decreased by reason of any change in method made by the Contractor, unless such change has been ordered by the Engineer, in which case the provisions of Clause 38 of the Conditions of Contract shall apply.

- 21. The rates for concrete shall include for fresh and hardened concrete tests prescribed in the Specifications including making and testing concrete cubes and forwarding the results to the Engineer. Testing to be carried out by a Test Laboratory approved by the Engineer. The Contractor shall maintain a written log of cubes prepared indicating date of testing and results achieved. The Contractor shall designate a qualified person for preparation and follow-up on cube tests in co-ordination with the Engineer / Engineer's Representative.
- 22. The rates for precast concrete paving shall include for all cutting, bedding, jointing and laying to falls.
- 23. The rates for precast concrete edging and kerbs shall include for formwork, concrete bed and backing, all cutting, jointing and laying.
- 24. All formwork must be cleaned and oiled prior to use. All exposed concrete edges shall have a 20 mm chamfer unless otherwise directed and costs deemed to be included in formwork rates. The formwork rates shall also be inclusive of all necessary box outs and cut outs for individual holes up to 1 square metre.

The rates for forming rebates in concrete walls etc. shall include for forming pockets for the fish tail fixing cleats where required.

Deductions from formwork quantities will be made for openings more than 1 square metre in area.

- 25. Formwork for upper surfaces inclined at 30 degrees or less to the horizontal is not measured and the cost of any such formwork used will be deemed to be included in the relevant concrete item rate.
- 26. Wrought formwork where specified will be measured to 150 mm below final ground levels.
- 27. Items required for Structural Joints and Construction Joints shown on drawings shall be paid for as per the rates in the Bills of Quantities; the rate for providing and fixing PVC water bar is deemed to be inclusive of all joints, overlaps, junctions, welding, etc. formwork not shown on drawings shall be deemed to be included in the unit rates for concrete work.
- 28. All rates and sums in the Bills of Quantities shall be in Kenya Shillings and Cents.
- 29. If possible a construction wayleave of up to 9m for the Transmission Mains and construction wayleave of up to 3m for Distribution Mains will generally be allowed. In the event the above mentioned wayleave widths are not available due to obstructions or restricted access, the Contractor will execute the works using suitable approved alternative methods. The

costs for alternative methods are deemed to be covered by bid rates. No additional costs will be allowed.

Payment for site clearance will be based upon this width except that the Engineer reserves the right to restrict this width due to the presence of obstructions, roads, houses, footpaths, boundary walls, fences, trees and the like. Payment shall then be according to the actual area cleared. In case additional space is required this may be made available by the Contractor at his own cost.

No claim for additional space will be entertained by the Engineer. No claims for inconvenience and the like caused by obstruction will be entertained. The rates shall be deemed to include for reinstatement of fences, gates, etc.

30. All pipe diameters indicated in the Bills of Quantities and on Drawings are nominal. Fittings dimensions to suit size/type of pipes supplied by the Bidder and Bidder's rates are deemed to allow for this. No additional cost adjustment will be allowed.
31. Unless otherwise specified the method of measurement shall be in accordance with the Standard Method of Measurement of Civil Engineering Quantities (CESMM3) published by the Institution of Civil Engineers, London, 1991. In some cases variations to this method have been made to suit local practice. A Contractor shall be deemed to have priced the items accordingly and no claims relating to variation from the method of measurement stated in these documents shall be considered.
32. Items for buildings, electrical and mechanical works are not described using CESMM3 for clarity purposes.
33. All quantities have been measured in Metric Units.
34. Explanation of abbreviations used in the Bills of Quantities are as follows:-

L.S.	-	Lump Sum
P.S.	-	Provisional Sum
P.C.	-	Prime Cost
E.O.	-	Extra Over
Avg.	-	Average
Max.	-	Maximum
Min.	-	Minimum
n.e.	-	Not Exceeding
Nr	-	Number
mm	-	Millimetre
m	-	Linear Metre
m ²	-	Square Metre
m ³	-	Cubic Metre
Ha.	-	Hectare
Drg.	-	Drawing
Kg.	-	Kilogramme
H.T.	-	High Tensile
M.S.	-	Mild Steel
B.L.	-	Bitumen Lined
Dia.	-	Diameter
E.C.	-	Epoxy Coated
E.L.	-	Epoxy Lined
S & S	-	Socket & Spigot
C.L.	-	Cement-mortar Lined
C.I.	-	Cast Iron
D.I.	-	Ductile Iron
uPVC	-	Unplasticised Polyvinyl Chloride
G.I.	-	Galvanised Iron
G.M.S.	-	Galvanised Mild Steel
P.E.H.	-	Palothene
PE	-	Polyethylene
Hr.	-	Hour
FE/Fe	-	Ferrous

35. The rates for metalwork shall include for bolts, nuts, washers and rag-bolts, fixing as specified or in accordance with the manufacturer's instructions and rectifying as specified any parts of the painted, coated or galvanised surface that may be damaged either before or after erection.
36. The rates for fixing penstocks and flap valves etc. shall include for bedding and grouting, testing for water tightness, greasing all working parts and leaving in good working order; where the item includes supply, the rates shall also include for supplying drawings for approval before manufacture is commenced.

37. Concrete Works

- a) Item : Concrete
Unit : m³ of each class

Concrete shall be measured by the cubic metre of each class calculated from the dimensions given on the drawings or as instructed by the Engineer.

No deduction shall be made in the measurement for:

- i) bolt holes, pockets, box outs and cast-in components provided that the volume of each is less than 0.15 cubic metres;
- ii) mortar beds, fillets, drip moulds, rebates, recesses, grooves, chamfers and the like of 100 mm total width or less;
- iii) reinforcement.

The rates for concrete shall include for the cost of:

- i) provision and transport of cement, aggregate and water;
- ii) admixtures and workability agents including submission of details unless otherwise specified;
- iii) batching, mixing, transporting, placing, compacting and curing;
- iv) class UF1 finish;
- v) laying to sloping surfaces not exceeding 15 degrees from the horizontal and laying to falls;
- vi) formwork to blinding concrete;
- vii) placing and compacting against excavated surfaces where required including any additional concrete to fill overbreak or working space;
- viii) complying with all the requirements of the Specifications.

- b) Item : Blinding Concrete
Unit : m²

Blinding concrete shall be measured by the square metre to specified thickness. No deduction shall be made for openings provided that the area of each is less than 0.5 square metres. Blinding concrete over hard material shall be measured as the volume used provided that the maximum thickness of 150 mm allowed for overbreak is not exceeded.

The rate for blinding concrete shall include for all costs itemised in Note 37(a) of this Preamble.

- c) Item : No Fines Concrete
Unit : m³

No fines concrete shall be measured by the cubic metre calculated from the dimensions given on the drawings or as instructed by the Engineer.

The rate for no fines concrete shall include for all costs stated in Note 37(a) of this Preamble.

- d) Item : Unformed Surface Finishes
Unit : m² of each class of finish

Unformed surface finishes shall be measured by the square metre from the dimensions given on the drawings or as instructed by the Engineer.

The rate for concrete in Notes 35(a), (b) and (c) shall include for class UF1 finish.

The rate for unformed surface finishes shall include for the cost of complying with Clause 410 of the Specification.

- e) Item : Formwork for Formed Surface Finishes
Unit : m² of formwork for each class of finish for each range of inclinations

Except as stated below, formwork shall be measured by the square metre of formwork actually in contact with the finished face of the concrete. No deduction shall be made in the measurement for openings, pipes, ducts and the like, provided that the area of each is less than 0.50 square metres. Unless otherwise stated, if the volume or area of concrete has not been deducted when measuring the concrete in accordance with Notes 37(a), (b) and (c), formwork to form or box out the void shall not be measured.

Formwork less than 300 mm high to edges of slabs shall be measured by the linear metre in accordance with Note 37(f) of this Preamble.

Inclined formwork shall be measured in accordance with the following classifications:

- i) Horizontal: 85 to 90 degrees inclination from vertical
- ii) Sloping: 10 to 85 degrees inclination from vertical
- iii) Battered: 0 to 10 degrees inclination from vertical
- iv) Vertical: 0 degrees
- v) Sloping upper surfaces inclined at more than 15 degrees from the horizontal

Formwork required for blinding concrete, to form construction joints and shear keys for future concrete and other construction surfaces shall not be measured and the costs shall be included in the rates for other work.

Formwork to contraction and expansion joints shall be measured by the square metre on one face only. The rates shall include for the costs stated below and for forming recesses for sealant and channels for grout.

The rates for formwork shall include for the cost of submission of details, providing and transporting all materials for formwork and falsework, erection including provision of supports, fillets and chamfers 75 mm and less in width, bolts, ties, fixings, cutting to waste, drilling or notching the formwork for reinforcement where required, working around pipes, ducts, conduits and waterstops, temporary openings, cleaning, dressing, stripping, filling bolt holes and any remedial work and for complying with all the requirements of the Specifications.

- f) Item : Formwork to Edges of Slabs
 Unit : m of each class of finish
 Formwork less than 300mm high to edges of slabs shall be measured by the linear metre.

The rate shall include for the costs stated in Note 37 (e) of this Preamble.

- g) Item : Waterstops
 Unit : m of each type

Waterstops shall be measured by the metre run of each type.

The rate for waterstops shall include for the provision, installation, jointing, any sealants required at the face of the concrete and for placing and compacting concrete around the waterstop.

- h) Item : Mortar
 Unit : m²
 Mortar used for bedding base plates and the like shall be measured by square metre as the area of the base plate at the specified nominal thickness of bedding.

Mortar used in filling bolts pockets and the like shall not be measured separately and the costs shall be included in the rates for the bolts.

The rates for mortar shall include for the cost of providing and placing the mortar and of complying with all the requirements of the Specifications.

- i) Item : Admixture Workability and Hardening Agents
 Unit : As specified in the Special Specification

Where required by the Special Specification admixtures, workability and hardening agents shall be measured and paid for in accordance with the Special Specification.

- j) Item : Reinforcement
 Unit : Kilograms or Tonnes

Steel fabric reinforcement shall be measured in accordance with Note 37(k) of this Preamble.

Steel (plain and deformed bars) reinforcement shall be measured by the tonne and shall be the calculated weight of the steel required including splice lengths shown on the drawings. No allowance shall be made in the measurement for rolling margins or cutting waste. The density of steel shall be taken as 7850 kilogrammes per cubic metre.

The rates for reinforcement shall include for cost of providing, cutting to length, splice lengths additional to those shown on the drawings, laps, bending, hooking, waste incurred by cutting, cleaning, spacer blocks, provision and fixing of chairs or other types of supports, welding, fixing the reinforcement in position including the provision of wire or other material for supporting and tying the reinforcement in place, being reinforcement aside temporarily and straightening, placing and compacting concrete around reinforcement and for complying with all the requirements of the Specifications.

- k) Item : Fabric Reinforcement
 Unit : m² of each type
 Steel fabric reinforcement shall be measured by the square metre and shall be the calculated area excluding any allowance for laps.

The rate for steel fabric reinforcement shall include for the costs stated in Note 37(j) of this Preamble.

Sewers, Drains and Pipelines

38. The rates for pipes, pipework and specials shall include for supply of all materials, setting of concrete blocks and hardwood wedges where specified, providing any temporary support that may be necessary, preparing ends of pipes for jointing and all labour in jointing, protection to detachable joints, cleaning pipelines and rectifying as specified any damage to surface coating. The rates shall also include for all cutting of pipes consequent upon structures, specials and fittings being constructed in the designated positions.
39. The rates for concrete surround, bed and haunching to pipes, concrete in anchor blocks to pipes, and to gully pots shall include for all formwork required and for any additional concrete the Contractor may place for his own convenience or by reason of the method of carrying out the work.
40. Pipes, Fittings and Valves – Specifications are given in Volume II, Section 1 – General Specifications and Particular Specifications or in applicable International Standards referred to SRNs listed in Volume II, Section 2:
- a) uPVC pipes and fittings as specified
 - b) Steel pipes and fittings as specified
 - c) Ductile Iron (DI) pipes and fittings as specified
 - d) Galvanised Iron (GI) pipes and fittings to SRN 203
 - e) Flexible joint spigot and socket precast concrete (PVC) pipes to SRN 409
 Rigid joint spigot and socket pcc pipes to SRN 409
 Ogee joint pcc pipes to SRN 407
 - f) All flanges as specified
 - g) Gate valves as specified
 - h) Double orifice air valves as specified
 Single large orifice air valves as specified
 Single small orifice air valves as specified
 - i) Fire hydrants to SRN 509
 - j) Butterfly valves as specified
 - k) Ball float valves as specified
 - l) All pipe, fittings and valve diameters indicated are nominal diameters
 - m) Supply of pipes and fittings to include for cost of supply of all jointing materials like bolts, nuts, washers, gaskets, packings, jointing glue, etc.
 - n) uPVC pipes to be supplied complete with compression joints
 - o) Galvanised Iron pipes to be with threaded coupling joints, or as specified
 - p) Precast concrete ogee pipes to be complete with all jointing materials

Shop Drawings

41. Detailed shop drawings, in triplicate, to be provided for all items where ferrous pipework, fittings and any metalwork i.e. penstocks, ladders etc., are indicated to be installed as outlined in the bills of quantities and drawings. These drawings to be submitted well in advance of ordering of the above materials and the billed rates are deemed to include for provision of these drawings, samples where requested, and inspection where fabricated by the Engineer or his Representative.

Prime Cost Items

42. Attendance on nominated Sub-Contractors shall include for all or any of the following as appropriate - labour, materials and plant required for taking delivery, carting, storing, hoisting and builder's work entailed in fixing, erecting and installing as specified or in accordance with the manufacturer's instructions and all overheads and profits.
43. When, in the opinion of the Engineer, it is reasonable to expect the Contractor to price the attendance item it will be so included in the Bills of Quantities. In all other cases it will form the subject of a Provisional Sum to be expended on a Dayworks basis.
44. Profit shall include for establishment charges, profit and any other costs not included in the attendance item.
45. The rates for the supply of any mechanical and electrical equipment shall include for the submission of factory test results.
46. Definitions of Terms used in Bill of Quantities
- a) **'Provide'** - shall mean all costs to cover purchase of materials in good condition, services for transaction with the supplier, supervision, transport to site of works all charges for rental, consumptions, overheads and profits throughout the Contract. It shall also include for all maintenance, insurance and handling and storage whenever applicable.

- b) **‘Excavate for’** - shall mean handling of any material from its incumbent position intended for specified work shown in the drawings or directed by the Project Manager and backfilling and compacting part of material after laying of pipes or erection of structures, and cart away remaining to tips to be provided by the Contractor. The cost for this work shall include all survey, supervision, labour, tools, machinery, protection of work, pumping, insurances and overheads and profits.
 - c) **‘Laying’** - shall cover all work necessary for placing an object or material to true line and level specified in a drawing or as directed by the Engineer.
 - d) **‘Jointing’** - shall mean process of fixing specified material, pipes, fittings and specials together using appropriate tools, material, labour and machinery. It should cover for all work necessary to provide matching of opposite parts in size, shape and position indicated and clamps, seatings and holders to hold firmly.
 - e) **‘Testing’** - shall mean provision of all materials, apparatus, labour, machinery, charges for the media or chemical to be used and their transport, repair of object to be tested if required, re-testing, excavation of any part for visual inspection, erection of any type all until the object has been certified as having passed the required test satisfactorily.
 - f) **‘Install’** - shall include for all work requirements stipulated for "laying" and "jointing". It will cover all expenses for the provision of labour, materials, removal from stores, complete erection, installation, supervision, site testing and commissioning as per the Specifications.
47. The unit rates for the various items listed in the BOQ shall include, except insofar as it is otherwise provided under the Contract, all labour, construction equipment, materials, erection, maintenance, supervision, insurances etc. set forth or implied in the Contract. These are all deemed to include all allowances for waste or surplus of any kind, which are not subject to measurement.
48. **The rates to be indicated in the Bills of Quantities shall be inclusive of all applicable Government duties and taxes**

AFD/NAIROBI WATER AND SANITATION PROJECT		
WATER AND SANITATION WORKS IN NAIROBI INFORMAL SETTLEMENTS		
GRAND SUMMARY PAGE		
BILL NO	DESCRIPTION	AMOUNT (KShs)
1	Preliminary and General Items	-
2	Mji wa Huruma	-
3	Matopeni	-
4	Mariguini	-
5	Kamola	-
6	Kiambiu	-
7	Dayworks	-
BILL TOTAL EXCLUSIVE OF VAT		-
ADD 10% CONTINGENCY		-
BILL TOTAL INCLUSIVE OF CONTINGENCY		-
ADD 16% VAT TAX		-
BILL TOTAL INCLUSIVE OF VAT AND CONTINGENCY		-

AFD/NAIROBI WATER AND SANITATION PROJECT

WATER AND SANITATION WORKS IN NAIROBI INFORMAL SETTLEMENTS

BILL 1 - PRELIMINARY AND GENERAL ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	CLASS A: GENERAL ITEMS				
	<u>Contractual Requirements</u>				
A110	Performance Security	Item	L.S		-
A120.1	Insurance of Works and Contractor's Equipment	Item	L.S		-
A120.2	Insurance against Injury to Workers (WIBA)	Item	L.S		
	<u>Special Requirements</u>				
	<u>Office and Accommodation for Resident Engineer's Staff</u>				
A211.1	Provide rented offices for the Resident Engineer, total floor area of approx 250 m2 . As approved by the Engineer's Representative. To include provision of security round the clock	month	18.00		
A211.2	Allow for maintenance of the Resident Engineer's Office, including supply of provisions and consumables as specified under the Specifications	month	18.00		
A211.5	Percentage adjustment for overheads and profits to the provisional sum for Items A211.2 to A211.4	%			-
	<u>Transport for Engineer's Staff</u>				
A221.1	Provisional sum of Kshs 9,000,000 for purchase of Two (2) Double Cab Pick Ups 4WD Vehicles, Engine capacity not less than 2800cc for use by Engineer's Staff as instructed. Vehicles to revert to the Employer at the end of the Project.	PS			
A221.2	Allow for operation, maintenance, insurance and running servicing costs of the vehicles Purchased under item A221.1 for the contract period including DNP, as directed by the Engineer	km	100,000.00		-
A221.6	Percentage adjustment for overheads and profits to the provisional sum for Item A22.1	%			
	Page Total Carried Forward to Next Page				

BILL 1 - PRELIMINARY AND GENERAL ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Sum Brought Forward From Previous Page				
	<u>Equipment for use by Engineer's Staff</u>				
A231.1	Allow a provisional sum of KES 1,000,000 for furnishing and equipping the Engineer's offices. To include furniture, laptop computers, mobile phones, digital cameras, printers e.t.c	PS			
A231.11	Percentage adjustment for overheads and profits to the provisional sum for Item A231.1	%			
	<u>Attendance to Resident Engineer's Office</u>				
	Provide the following Staff for the Resident Engineer's Office to be employed by the Contractor but to be under the exclusive day to day instruction of the Resident Engineer. Rates to include for all employees benefits				
A241.1	Drivers, 2 No.	month	18.00		
A242.1	Chainmen, 1 No.	month	18.00		
A244.1	Office Secretary, 1 No.	month	18.00		
A244.2	Office Assistant 1 No.	month	18.00		
	Page Total Carried Forward to Next Page				

BILL 1 - PRELIMINARY AND GENERAL ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Sum Brought Forward From Previous Page				
	<u>Setting Out & Survey Work</u>				
A269.1	Allow for provision of As-Built Drawings in accordance with Clause 147 of the Specifications	Item	L.S		
A269.2	Allow for provision of Operation and Maintenance (O&M) Manuals in accordance with Clause 139 of the Specifications	Item	L.S		
	<u>Sign Boards</u>				
A279.1	Allow for provision, erection and maintenance of Project Sign Boards at sites to be indicated by the Engineer within the Project Area and removal upon completion of the project Details of the Sign Board are shown on Drawing	Nr	2.00		
	`				
	<u>Method Related Charges</u>				
	The tenderer may insert in the Bill of Quantities such items for Method-Related-Charges as he may decide to cover items of work relating to his intended method of executing the works, the cost of which are not to be considered as proportional to the quantities of the other items and for which he has not allowed in the rates and prices for the other items.				

	Tenderer may include additional sheets of paper if necessary.				
	Page Total Carried Forward to Next Page				

BILL 1 - PRELIMINARY AND GENERAL ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Sum Brought Forward From Previous Page				
	<u>Accommodation, buildings and services</u>				
A311	Contractor's Camps and Storage Yards: Allow for Establishment of the Contractor's Camp(s), Offices, Storage Yard and other facilities including mobilization, demobilization and Removal on Completion. Include for all equipment, temporary measures, machines, tools, materials, facilities for workers, water and electricity supply etc. for execution of the Works, for the entire Contract Period. Note: The Employer has No Land available to offer for Contractor's Camps and Stores, Storage of Materials, Preparation of Concrete etc. Identification and procurement of suitable land for Contractor's Camp, whether rented or purchased, is the responsibility of the Contractor.	Item	L.S		
	<u>Other Provisional Sums</u>				
A426	Allow provisional sum of Kshs.3,500,000 to be spent in whole or part, for community sensitisation/mobilisation activities and Training of identified CBOs for Operation of the constructed facilities. To be expended as directed by the Engineer	PS			3,500,000.00
A427	Allow a provisional sum of Ksh2,400,000 to be spent in part or whole, for payment of NCWSC connection fee for the proposed water and sewer connections	PS			
A42.1	Contractors overhead and profit items A421 to A427	%			
	Page Total Carried Forward to Next Page				

BILL 1 - PRELIMINARY AND GENERAL ITEMS

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Sum Brought Forward From Previous Page				

A7	<u>Specific Conditions</u>				
A279.8	Allow for a sum for implementation ESHS including for ESIA, PSEA, GBV, HIV as described in the technical specifications. Contractors will be evaluated on the responsiveness to provisions in the specifications on a pass or fail basis.	Item	L.S		
	Bidders are advised to refer to ITB 35.2 a) to e), and evaluation criteria 1.1 on ESHS methodology evaluation while quoting for this item. Cost to be carried forward from the ESHS Cost schedule				
A279.10	Allow for a sum for Security implementation carried forward from the Security Cost Schedule	Item	L.S		
	Bidders are advised to refer to ITB 35.2 a) to e), and evaluation criteria 1.2 on Security methodology evaluation while quoting for this item. Cost to be carried forward from the Security Cost schedule				
BILL 1 COLLECTION CARRIED TO GRAND SUMMARY					

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements					
BILL 2. MJI WA HURUMA SETTLEMENT					
BILL 2.1: WATER SUPPLY WORKS					
BILL 2.1.1 - WATER PIPELINES					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	These works are to be carried out along narrow wayleaves where there may be some existing active services (electrical, water, e.t.c). This should be considered in the Contractor's rates. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of sites for structures, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works <u>CLASS A: GENERAL ITEM</u> <u>Testing of works</u>				
A25					
A25.11	Pressure testing and commissioning for the pipeline, including all necessary equipment, materials and labour for the works e.g. delivery of water for testing, fittings, disposal of used water. Pipe diameter 50 - 150 mm	m	1,560		
A25.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified. Pipe diameter 50 - 150 mm CLASS D: DEMOLITION AND SITE CLEARANCE	m	1,560		
D1	General clearance 1.5m wide corridor along the pipeline. Including bushes, shrubs and small trees not exceeding 300mm girth and grubbing up roots	m	1,560		
D3	Removal of Stumps (Provisional)				-
	Grub up stumps and roots and cart away to approved tips				-
D3.1	Girth: 0.5 m - 1.0 m	nr	5		
D3.2	Girth: 1.0 m - 2 m	nr	3		
	Note:- Girth shall be measured 0.5 m above ground level CLASS I: PIPE WORK - PIPES <u>Provide and Lay</u> Rate to include Purchase, transportation, laying, jointing, excavation in normal material depth n.e. 2.0 m, preparation of surfaces, disposal of excavated material, shoring sides of excavation, dewatering and backfilling with suitable selected excavated material, to Specifications. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of the all Pipeline Routes, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works HDPE PN 16				-
I712.0	OD 32mm	m	560		
I712.1	OD 63mm	m	380		
I712.2	OD 90mm	m	400		

I712.3	OD 110mm	m	220		
PAGE TOTAL CARRIED TO BILL 2.1.1 COLLECTION PAGE					

BILL 2.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>CLASS J: PIPE WORK - FITTINGS AND VALVES (Provisional)</u> <i><u>Provide and Install (Rate to include supply of jointing materials, Stainless steel bolts, nuts, gaskets etc)</u></i> <u>HDPE PN16 Bends</u> OD 110 mm J611.3 45° Nr 2 J611.4 90° Nr 1 OD 90 mm J611.5 45° Nr 2 J611.6 90° Nr 1 OD 63 mm J611.7 45° Nr 1 J611.8 90° Nr 2 OD 32 mm J611.7 45° Nr 10 J611.8 90° Nr 0 <u>Junctions</u> J621.5 OD 90mm x OD 63mm HDPE Tee Nr 3				
PAGE TOTAL CARRIED TO BILL 2.1.1 COLLECTION PAGE					

BILL 2.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
J34	<u>Mechanical Joints (Couplings)</u> (Rate to include stainless steel bolts and nuts)				-
J341.1	DN 50mm to OD 63mm transition step down ferrous coupling to join HDPE pipe with GI pipe <u>Valves</u> Supply, handle, deliver to site, fix in place and test inclusive of all fittings as in the Standard drawings . Valves to BS 5163 and EN 1074 Standards. Rate for valves shall also include for all necessary fittings (Tees, Spigot pipes etc) as per drawings Air-Valves <i>Air Valves shall be Anti shock combination air valves, with a built in anti-water hammer non slam surge prevention system.To include an isolation valve.of DN 50 mm</i>	nr	1		
J861.1	PN 16 DN 90 mm <u>Water Meters</u> MultiJet bulk cold water meters (Class B). Water meters to be as specified in Clause 404.10 of the specifications	nr	1		
J911.1	DN 25mm	nr	9		
J911.2	DN 75mm	nr	1		
	<u>Hydrant</u> Rate to include Tee and associated fittings				
J911.1	DN 90 mm	nr	1		
	<u>ANCILLARY WORKS</u> Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings. <u>Note:-</u> Items for work in this class shall include:- - Excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, masonry blocks, reinforcement, formwork, joints and finishes. - Tips for disposal of excavated material or debris to be identified by the Contractor in liaison with the Local Authority. <u>In Situ Chambers</u> Provide all materials and construct Meter chamber internal dimensions 1200mm x 1200mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing				
PAGE TOTAL CARRIED TO BILL 2.1.1 COLLECTION PAGE					

BILL 2.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
K112.1	Depth: not exceeding 2.0 m Provide all materials and construct Valve chamber internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing	nr	1		
K112.2	Depth: not exceeding 2.0 m <u>Road Crossings</u> - <i>Extra-overs for normal pipe laying for road crossing works: to include breaking up and permanent reinstatement of roads and provision of a sleeve as per standard drawings</i>	nr	5		
K731.1	Pipe bore: 90 mm on gravel road <u>Marker Posts</u> - <i>Provide and install RC standard marker posts for:</i>	m	15		
K82.4	Along Pipeline at 300 m spacing and at change of directions, , inscribed "MAJI" and Diameter of the Pipeline <u>CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u> - <i>Extras over excavation and backfilling for excavation in Rock. Rate to include carting away and disposal. In pipe trench and chambers (Provisional).</i>	nr	3		
L111.1	Excavation in trench for rock class "A"	m ³	121		
L111.2	Excavation in trench for rock class "B"	m ³	73		
L111.3	Excavation in trench for rock class "C"	m ³	48		
	<u>Note:-</u> Blasting is NOT permitted for Item L11 - - - - - -				
PAGE TOTAL CARRIED TO BILL 2.1.1 COLLECTION PAGE					

BILL 2.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<p>- Imported Granular Fill (Provisional)</p> <p><i>Provide, transport to site and place imported granular material and compact in bed (100 mm thick) and surround to pipes (200 mm thick) as directed/approved by Engineer</i></p>				
L531	Surround To pipes nominal bore: n.e. 150 mm	m	940		
L54	Mass Concrete Surround (Provisional)				
L551	<p>- 300mm thick Mass Concrete Surround Class 15/20 to pipe as per Standard Drawings at locations directed by the Engineer. Rate to include for formwork, supports, vibrating, etc.</p>	-	-		
		m	360		
	<u>CLASS X:- MISCELLANEOUS</u>				
X51	Supply and install with item decrypted before, tracable warning tape, permanently imprinted with= "CAUTION WATER PIPE", color= blue, width= 50mm, thickness= 5mm.	m	940		
PAGE TOTAL CARRIED TO BILL 2.1.1 COLLECTION PAGE					

BILL 2.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	- BILL 2.1.1 COLLECTION PAGE				
1	From page 1				
2	From page 2				
3	From page 3				
4	From page 4				
5	From page 5				
BILL 2.1.1 TOTAL CARRIED TO BILL 2.1 COLLECTION PAGE					

BILL 2.1.2 - WATER KIOSK					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>CLASS E: EARTHWORKS</u>				
	<u>Excavations</u>				
	<i>Rates for excavation to include for disposal</i>				
E411	Excavations to reduced levels n.e. 0.2 mm deep and cart away	m3	2.28		
E412	Ditto 0.2 - 0.5mm deep	m3	3.42		
E313	Excavate foundation trenches n.e 1500mm deep from stripped level	m3	11.40		
E339	Extra over excavations for excavating in rock Class B	m3	3.42		
	<u>Filling</u>				
	-				
	<u>Filling to completed structures including compaction as specified.</u>				
E615.1	300mm Hardcore	m3	3.42		
E615.2	50mm stone dust blinding to hardcore	m3	0.57		
E611	Return fill and ram - make up level	m3	4.00		
	<u>CLASS F: CONCRETE WORK</u>				
	<u>Provide and Place Mass concrete Class 15</u>				
	-				
F511	75mm Concrete 1:4:8 Blinding	m3	2.00		
	<u>Provide and Place structural concrete Class 25</u>				
F622	Strip foundation	m3	2.00		
F621	150mm Thick floor and roof slab	m3	4.00		
F662	Bases, Column and Beams	m3	4.00		
	<u>Provide and place paving slab around the water kiosk. Rate to include levelling and compacting the surface.</u>				
R426	600 mm Square PCC paving slab laid on well levelled and Compacted surface	m ²	6		
G5	<u>CLASS G: CONCRETE ANCILLARIES</u>				
	-				
	<u>REINFORCEMENTS</u>				
	<i>Rates to include for binding wire</i>				
	<u>High yield steel bars to BS 4449</u>				
	-				
G522	Diameter: 8mm	kg	80.00		
	-				
G523	Diameter: 10mm	kg	230.00		
	-				
G524	Diameter: 12mm	kg	250.00		
	-				
	PAGE TOTAL CARRIED TO BILL 2.1.2 COLLECTION PAGE				

BILL 2.1.2 - WATER KIOSK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
G562	<u>Steel fabric mesh reinforcement to B.S. 4483</u> BRC mesh fabric reinforcement ref A142 (weighing 2.2kg/m2) laid in Floor slab (measured net-no allowance made for lamps)	m2	15.00		
	FORMWORK <u>Sawn formwork (fair finish) to: -</u>				
G242.1	Vertical and soffits of slabs	m2	20.00		
G242.2	Vertical sides and Soffit of beams, columns and fetching bay	m2	15.00		
	CONCRETE ACCESSORIES				
G813.1	40mm x 30mm drainage groves in concrete to detail drawings	m	15.00		
G812	Cement screed on the top surface of roof slab to minimum fall gradient of 1.50	m2	6.00		
G813.2	Bituminous felt cover on the surface of the cement screed on the roof slab.Allow for 300mm lapping.	m2	6.00		
G831	Allow for 25mm nominal core bore class B G1 pipe through inserts in floor slab, roof slab and window sill	m	2.00		
	<u>CLASS I: PIPEWORK - PIPES</u>				
	-				
	Drainage system				
I512	100mm nominal bore uPVC pipe class B in trench, depth n.e 1.5m	m	10.00		
	Piped Building Services				
	Portable water supply installation to detail drawings for Water Kiosk				
Z511	25mm diameter G1 class 'B' pipe to BS 1387, thread joints to BS 21 for interconnection from mains to tank and to the service/ draw off points	M	30.00		
Z512	25mm nominal bore G1 fittings as follows				
Z512.1	Unions	Nr	3.00		
Z512.2	Elbows	Nr	7.00		
Z512.3	Bends	Nr	4.00		
Z512.4	Nipples	Nr	15.00		
Z512.5	Long thread nipples	Nr	2.00		
Z512.6	Equal tees	Nr	4.00		
Z512.7	Back nuts	Nr	4.00		
Z512.8	<u>Peglers (or equivalent) gate valves</u>	Nr	5.00		
Z512.10	Floater valve complete	Nr	1.00		
Z512.11	DN 25 mm cold water meter (Multijet, Brass body)	Nr	1.00		
Z512.12	Supply and install prepaid meter dispenser with 3 draw-off taps	Nr	2.00		
Z524	10,000 litre plastic water tank supported on Roof slab. Roto tank or equivalent to be approved by the engineer before supply	Nr	1.00		
	PAGE TOTAL CARRIED TO BILL 2.1.2 COLLECTION PAGE				

BILL 2.1.2 - WATER KIOSK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
K211	<u>CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES</u> 1000mm * 1000mm * 1400mm deep soak pit to detail drawing. Include for Hardcore fill inside and a 200mm thick granular fill layer outside the walls.	Nr	1.00		
K330	In situ concrete gulley trap to detail drawing	Nr	1.00		
	<u>CLASS U: MASONRY</u> - <u>Approved stone walling of minimum compressive strength of 10N/mm² bedded in cement sand (1:3) mortar reinforced with and including gauge 12 hoop soft wire gauge hoop iron at every alternate course. Keying to be done on exterior wall surfaces for the superstructure</u>				
U821	200mm Substructure walling	m2	10.00		
U811	- 200mm Superstructure Walling	m2	10.00		
U881	50 x 6mm thick hoop iron <u>Approved damp proof course (bituminous)</u>	m	135.00		
U882	200mm Wide <u>SHELVES, WINDOWS AND DOORS</u> provide and fix 350mm wide * 25mm thick timber shelves (to detail drawings.) <i>Supply and Fix the following purpose made steel windows and door as per detail manufactured from heavy duty standard sections primed with one coat of red oxide primer and fixing to masonry or concrete head and jambs complete with closing mechanism and other fittings.</i>	m	9.00		
	Window size 1200 x 900 mm high overall	Nr	1.00		
	Glazed single swing door overall size 900 x 2100mm high	Nr	1.00		
Z343	YALE high security padlock (Large)	Nr	2.00		
	-				
	PAGE TOTAL CARRIED TO BILL 2.1.2 COLLECTION PAGE				

BILL 2.1.2 - WATER KIOSK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>INTERNAL WALL FINISHES</u>				
	- 15mm thick lime plaster (1:2:9) as described to:-				
	-				
G812.1	Interior surfaces of walls	m2	11.80		
G812.2	On Roof Slab	m2	5.50		
G812.2	Exposed front areas of fetching bay	m2	1.80		
	<u>CLASS V: PAINTING</u>				
	<i>Prepare and apply</i>				
	-				
V531	Plastered Internal surfaces of walls 2-coats of emulsion undercoat paint and 3-coats of first grade oil paint to	m2	11.80		
V113	2-coats of primer paint and 3-coats of first grade oil paint to vertical surfaces of metal doors and windows.	m2	3.50		
V3	Allow a PC sum for branding and paintworks on the Water Kiosk with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	PC			
	<u>CLASS U: WATERPROOFING</u>				
	<u>Damp-proof membrane</u>				
	-				
W138	Single layer of 100 gauge polythene sheeting laid on blinded hardcore with 150 mm side laps to receive concrete	m2	4.50		
	<u>Anti - termite treatment</u>				
	-				
W500	Supply and application of Termidor 25EC pesticide treatment for the control of termites to the soil beneath the foundations, executed by a Pesticides Control Products Board licenced professional pest control operator, with a ten year guarantee to surfaces of excavations	m2	4.50		
	-				
	PAGE TOTAL CARRIED TO BILL 2.1.2 COLLECTION PAGE				

BILL 2.1.2 - WATER KIOSK					
	Bill 2.1.2 Collection Page				
	Page 1 Total				
	Page 2 Total				
	Page 3 Total				
	Page 4 Total				
	Grand total for 1No. Water Kiosk				
	1. Total for 1No. New Water Kiosk	nr	1.00		
	2. Allow 50% cost of new kiosk for Rehabilitation of Existing Water Kiosk (1No)	nr	50%		
	-				
	BILL 2.1.2 TOTAL CARRIED TO BILL 2.1 COLLECTION PAGE				

BILL 2.1.3 - BOREHOLE DRILLING AND EQUIPPING					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
X500	Construction of borehole head-works around well head by constructing a concrete plinth and a chamber measuring 1mx1mx1m with class 20/20 mass concrete floor slab and walls. Chamber to have painted Gauge16 steel plate lockable access cover 1mx1m with anti-theft and weather resistant padlock.	No.	1.00		
X5.200	Allow a Provisional sum of Ksh. 200,000 for conducting condition assessment of the borehole and borehole facilities. This to include submersible pump, casing, screens, electrical system which may involve camera inspection...all as directed by the Engineer. Unservicable equipment will be delivered to the Client's Yard. The Contractor will be required to provide a method statement before implementation of the works	Lump sum	1.00		
X5.201	Design, supply, installation and commissioning of a submersible pump capable of delivering a total demand of 213 m3/day at a total dynamic head of 200m and shall be rated for a discharge of 23 m3/hr.				
	fittings. DN 90mm gate valve and control valve as specified or equal and approved. DN 90mm Non-return valve as specified or equal and approved. DN 90mm line strainer, check valves, elbows, tees, unions, etc. All other necessary fittings or approved equivalent.	Nr	1.00		
X5.202	A specific pump performance shall be submitted to the engineer for approval. (Provisional) Provide, install and commission a 3 phase, 415Vac, COL control panel for the above pump comprising of the following:- Provisional a) Appropriate rating contactor b) Appropriate rating thermal overload relay c) Over/under voltage phase failure protection relay d) Voltmeter e) Voltmeter selection switch f) Water level relay g) Appropriate Ammeter h) Appropriate MCCB for the mains i) Appropriate MCCB for the control circuit j) Start, Stop/reset push button (Green marked "START", and Black/Red Marked "STOP/RESET") k) Pilot indicator lights (green marked "PUMP RUN", red marked "OVER LOAD TRIPPED", yellow marked "BOREHOLE LOW, white marked "TANK HIGH" etc l) Hours run counter range 0 - 99999 hours m) Cable looping box of appropriate rating	Lump sum	1.00		
X5.203	Enhanced MP204 Blackbox unit to integral circuit NB: A schematic and control wiring diagram MUST be supplied with the starter.	No	1.00		
X5.204	3" class B G.I rising main pipe c/w pipe locking clamp and pipe accessories	m	250.00		
X5.205	Supply of 3" crane sockets to the rising main	No.	42.00		
X5.206	Provide and install one 3" bulk flow meter class B (type and make to be approved by the Project Manager) c/w Non Return Valve at the well head. Rate to include all pipe and fittings at the well head.	No.	1.00		
X5.207	Electrode cable(pair)	m	440.00		
X5.208	Electrode pencils (pair)	No.	1.00		
X5.209	25mm Dipper tube complete	m	240.00		
X5.210	1.5mm2 Flat cable for float switch	m	100.00		
X5.211	2"*6" borehole cover c/w sundries	No.	1.00		
PAGE TOTAL CARRIED TO BILL 2.1.3 COLLECTION PAGE					

BILL 2.1.3 - EQUIPPING OF 1 NO. BOREHOLE

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
X5.212	1.5mm ² 2-CORE underground armoured cable – Electrodes	m	100.00		
X5.213	63A switch fuse "MEM" or equivalent	No.	1.00		
X5.214a	Allow a P.C. Sum for electricity supply and connection to the borehole site. Contractor is responsible for the application of electricity connection; follow up and for prompt supply and connection of electricity by KPLC.	PC	1.00		
X5.214b	Add a percentage of items 315 for contractor's overheads and profit.	%	15%		
X5.215	Allow a sum for testing and commissioning of the borehole equipping works.	Lump Sum	1.00		
X5.216	Provide for float switch to elevated tank and connect to the control panel and pump	sum	1.00		
X5.217	4 FT Copper earth rod complete with clamp	Set	1.00		
X5.218	Lead cable 10.0m ² single core (for earthing)	m	10.00		
X5.219	Submersible cable rubber sheathed 25mm ² 3 core submersible armored cable	m	240.00		
X5.220	Underground armored cable 25mm ² 3 core	m	95.00		
X5.221	Supply and install a 1400mm X 480 x 1800mm HIGH feeder pillar to house the control pannels and related Electrical controls. its to be from mild steel plate sheet 8x4x2.5mm thick Rate to include provision of steel door complete with anti theft and weather resistant padlocks and to be supplied painted a lacquer paint base coat and final jungle green spray coat. the feeder pillar to be supplied complete with stands for concrete mounting to approval of Resident Engineer	No	1.00		
X5.222	Class 20 concrete to foundation plinths trowelled smooth for feeder pillar anchor	m ³	3.00		
PAGE TOTAL CARRIED TO BILL 2.1.3 COLLECTION PAGE					

<u>BILL 2.1.3 - EQUIPPING OF 1 NO. BOREHOLE</u>					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.1.3 TOTAL TO COLLECTION PAGE PAGE 1 TOTAL PAGE 2 TOTAL TOTAL FOR EQUIPPING 1 No. BOREHOLE				
	Total Number of boreholes to be equipped	nr	1.00		

BILL 2.1.4 - REHABILITATION OF EXISTING ELEVATED TANKS					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	Class M: Steel Tower				
	4m High Steel Tower & 1No. 10m³ plastic tank				
M0.1	Demolition of existing 4m high steel tower and safe disposal.	Lump sum	1		
M0.2	Design, supply all materials, deliver to site and mechanical hoisting of a 4m high steel tank tower complete with walkway platform and cage ladder including all required fittings to integrate plastic tanks and steel tanks e.g ball valves, gate valves, non-return valves etc	Lump sum	1		
X92	10,000 Litres plastic water storage tank complete with DN 90mm high pressure pegler ball valve, inlet with DN 90mm pegler gate valve, outlets with DN 90mm pegler gate valves and an overflow with DN 90mm pegler gate valve and all other associated fittings.	Nr.	1		
	Foundation				
E411	Excavate in normal soil for tank footings size 1.5m x 1.5m x 1.5m	m3	3.50		
F662	Supply all materials, deliver to site, mix and vibrate reinforce concrete footings and Column studs. Rate to include all formwork, reinforcement bars for concrete footing and foundation bolts for the tower	m3	9.00		
	1No. 18m³ Elevated Steel Tank & 18m Steel Tower				
M0.1	Allow a PC sum of 2,500,000 for detailed condition assessment and testing of the existing foundation, steel tower and tank to ascertain, quantify requisite rehabilitation works	Lump sum	1		
	Class I: Plumbing Works				
	<i>All Steel Pipes shall be epoxy coated</i>				
I411.1	Supply and joint 100 mm dia. steel pipes including all bends, adoptors and jointing materials for the inlet to the tank.	m	20.00		
I411.2	Supply and joint 150 mm dia. steel pipes including all bends, adoptors and jointing materials for the Outlet to the tank.	m	20.00		
I411.3	Supply and joint 75mm dia. steel pipes including all bends, adoptors and jointing materials for the overflow and washout to the tank.	m	20.00		
I411.4	Supply and joint including all jointing materials 100 mm dia. Flanged gate valve for inlet.	nr	1.00		
I411.5	Supply and joint including all jointing materials 150 mm dia. Flanged gate valve for Outlet.	nr	1.00		
I411.6	Supply and joint including all jointing materials 50mm dia. Flanged gate valves for Washout	nr	1.00		
PAGE TOTAL CARRIED TO BILL 2.1.4 COLLECTION PAGE					

BILL 2.1.4 - REHABILITATION OF EXISTING ELEVATED TANKS					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	Valve Chambers Provide all materials and construct Valve chamber internal dimensions 1200mm x 1200mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing				
I411.10	inlet chamber	nr	1		
I411.11	outlet chamber	nr	1		
I411.12	Washout/overflow chamber	nr	1		
V3	Allow a PC sum for branding and paintworks on the elevated tank with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	PC			
PAGE TOTAL CARRIED TO BILL 2.1.4 COLLECTION PAGE					

BILL 2.1.4 - ELEVATED TANK FOR 1 NO. BOREHOLE

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.1.4 COLLECTION PAGE PAGE 1 TOTAL PAGE 2 TOTAL TOTAL FOR Rehabilitation of 1 No. ELEVATED TANK TOTAL FOR Rehabilitation of 1 No. ELEVATED TANK	nr	1.00		
BILL 2.1.4 TOTAL CARRIED TO BILL 2.1 COLLECTION PAGE					

BILL 2.1.5 - ELEVATED TANK FOR 1 NO. BOREHOLE (PROVISIONAL: THIS ITEM MAY BE REMOVED)					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
E4	Foundation				
E411	Excavate in normal soil for tank footings size 2.0m x 2.0m x 2.0m	m3	8.00		
F662	Supply all materials, deliver to site, mix and vibrate reinforce concrete footings and Column studs. Rate to include all formwork, reinforcement bars for concrete footing and foundation bolts for the tower	m3	18.00		
	Class M: Steel Tower				
M0.1	Supply all materials, deliver to site 18m high tank tower complete with walkway platform and cage ladder.	kg	12,000		
	Class N: Tank Erection				
N285.1	Supply, deliver to site and erect 6mm thick x 1m2 steel tank bottom panels on 18m tower. Rate to include sealing compound, bolts, and nuts, struts, stays and cleats.	nr	16.00		
N285.2	Supply, deliver to site and erect 6mm thick x 1m2 steel tank side panels on 6m tower. Rate to include sealing compound, bolts, and nuts, struts, stays and cleats.	nr	48.00		
N285.3	Supply all materials and erect 2mm thick steel cover to the tank. Rate to include all the necessary fittings.	sum	1.00		
	Class I: Plumbing Works <i>All Steel Pipes shall be epoxy coated</i>				
I411.1	Supply and joint 100 mm dia. steel pipes including all bends, adoptors and jointing materials for the inlet to the tank.	m	20.00		
I411.2	Supply and joint 150 mm dia. steel pipes including all bends, adoptors and jointing materials for the Outlet to the tank.	m	20.00		
I411.3	Supply and joint 75mm dia. steel pipes including all bends, adoptors and jointing materials for the overflow and washout to the tank.	m	20.00		
I411.4	Supply and joint including all jointing materials 100 mm dia. Flanged gate valve for inlet.	nr	1.00		
I411.5	Supply and joint including all jointing materials 150 mm dia. Flanged gate valve for Outlet.	nr	1.00		
I411.6	Supply and joint including all jointing materials 50mm dia. Flanged gate valves for Washout	nr	1.00		
PAGE TOTAL CARRIED TO BILL 2.1.5 COLLECTION PAGE					

BILL 2.1.5 - ELEVATED TANK FOR 1 NO. BOREHOLE (PROVISIONAL: THIS ITEM MAY BE REMOVED)					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	Valve Chambers Provide all materials and construct Valve chamber internal dimensions 1200mm x 1200mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing				
I411.10	inlet chamber	nr	1		
I411.11	outlet chamber	nr	1		
I411.12	Washout/overflow chamber	nr	1		
	Class V: Painting				
V811	Supply and apply two coats of black bituminous paint to the inside of the tank.	m2	88.00		
	Class V: Painting				
V111.1	Supply and apply two coats of silver aluminium paint to the outside of the tank	m2	88.00		
V111.2	Supply and apply two coats of silver aluminium paint to the tank tower, platform, pipes and cage ladder.	sum	1.00		
	Testing				
N285.4	Supply and apply recommended disinfectant and test the tank	sum	1.00		
PAGE TOTAL CARRIED TO BILL 2.1.5 COLLECTION PAGE					

<u>BILL 2.1.5 - ELEVATED TANK FOR 1 NO. BOREHOLE</u>					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.1.5 TOTAL TO COLLECTION PAGE				
	PAGE 1 TOTAL				
	PAGE 2 TOTAL				
	TOTAL FOR 1 No. ELEVATED TANK				
	TOTAL FOR 1 No. ELEVATED	nr	1.00		
BILL 2.1.5 TOTAL CARRIED TO BILL 2.1 COLLECTION PAGE					

BILL 2.1.6 - WATER POINTS AND PROVISION OF INDIVIDUAL CONNECTIONS					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	<p><u>Installation of PPDS</u></p> <p><u>Rates to include full construction/ installation and commissioning</u></p>				
X92.1	Construct, Supply, Install and Commission Water ATMs fetching bay/chamber to specifications as shown in the drawing. Rate to include for all materials, equipment, plastering, wiring and pipework comprising of 2 valves, meter and tees all of 1/2" diameter.	Nr	9		
X92.3	Supply and install prepaid meter dispenser with 2 draw-off taps	Nr	9		
X92.3	Provision and installation of 5 m ³ plastic tank (Approved by engineer) and pipework interconnection to the Water ATM (within 5m distance) with a 1 inch PPR pipes.	Nr	9		
	<p>The contractor is required to price for both alternatives X92.5 and X92.6 but extend the cheaper alternative to summary</p>				
X92.5	Construction and erection of steel tower to support the storage tank. Refer to drawing No. for details	Nr	9		
	<p>OR</p> <p>A masonry base can be used as an alternative to Steel tower when determined appropriate by the Resident Engineer - A circular masonry base 2.2 m diameters and 0.5 m high (at the Stand Pipe/ Water ATM) for the storage tank, The inside of the base to be filled with well compacted hardcore and covered with a mass concrete slab 100 mm thick. Contract rates to be applied. (Reinforcement or mesh)</p>	Nr			
V3	Allow a PC sum for branding and paintworks on the PPDs with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	PC			
BILL 2.1.6 TOTAL CARRIED TO BILL 2.1 COLLECTION PAGE					

BILL 2.1.7 - SOLAR SYSTEM WORKS					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	<p><u>Solar System</u></p> <p>-</p> <p>Design, supply, installation and commissioning of a solar-grid tied system including control panel and accessories to allow for a hybrid interconnection system and all connections and support structures to engineer's design and specifications; to power a submersible pump with a dynamic head of 250m and rated for a discharge of 23 m³/hr.</p>	LS	1		
	<p><u>Fence and Gate</u></p> <p><i>Rate to include supply of materials, delivery and installation.</i></p>				
X136	Fence made of Concrete posts and 12.5 Heavy gauge Chainlink complete with 12.5 Gauge x 6 strand galvanized barbed wired fencing as per Standard Drawings	m	60.00		
X234	Metal field single leaf gate as per Standard Drawings	nr	1.00		
PAGE TOTAL CARRIED TO BILL 2.1.7 COLLECTION PAGE					

BILL 2.1.8: GITHOGORO WATER COMPONENT**BILL 2.8.1.1 - WATER PIPELINES**

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	These works are to be carried out along narrow wayleaves whether there may be some existing active services (electrical, water, e.t.c)				
	<u>CLASS A: GENERAL ITEM</u>				
	-				
A25	<u>Testing of works</u>				
A25.11	Pressure testing and commissioning for the pipeline, including all necessary equipment, materials and labour for the works e.g. delivery of water for testing, fittings, disposal of used water. Pipe diameter 50 - 150 mm	m	4,084		
A25.12	Ditto but Pipe diameter 200 mm and above	m	0		
A25.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified. Pipe diameter 50 - 150 mm	m	4,084		
A25.22	Ditto but Pipe diameter 200 mm and above	m	0		
	<u>CLASS D: DEMOLITION AND SITE CLEARANCE</u>				
D1	General clearance 1.5m wide corridor along the pipeline. Including bushes, shrubs and small trees not exceeding 300mm girth and grubbing up roots	m	4,084		
D3	Removal of Stumps (Provisional)				
	Grub up stumps and roots and cart away to approved tips				
D3.1	Girth: 0.5 m - 1.0 m	nr	2		
D3.2	Girth: 1.0 m - 2 m	nr	1		
	-				
	Note:- Girth shall be measured 0.5 m above ground level				
	<u>CLASS I: PIPE WORK - PIPES</u>				
	<u>Provide and Lay</u>				
	Rate to include Purchase, transportation, laying, jointing, excavation in normal material depth n.e. 2.0 m, preparation of surfaces, disposal of excavated material, shoring sides of excavation, dewatering and backfilling with suitable selected excavated material, to Specifications.				
	-				
	<u>HDPE PN 16</u>				
	-				
I712.1	OD 63mm	m	2,048		
I712.3	OD 110mm	m	1,347		
I712.4	OD 160mm	m	689		

PAGE TOTAL CARRIED TO BILL 2.1.8 COLLECTION PAGE					
BILL 2.8.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>CLASS J: PIPE WORK - FITTINGS AND VALVES (Provisional)</u> <i>Provide and Install (Rate to include supply of jointing materials, Stainless steel bolts, nuts, gaskets etc as applicable)</i> <u>HDPE PN16 Bends</u> OD 160 mm J611.1 45° Nr 4 J611.2 90° Nr 6 OD 110 mm J611.3 45° Nr 3 J611.4 90° Nr 7 OD 63 mm J611.7 45° Nr 4 J611.8 90° Nr 10 <u>Junctions</u> J321.1 DN 200 mm x 200 mm All Flanged Tee (Steel) Nr 0 J321.1 DN 150 mm x 150 mm All Flanged Tee (Steel) Nr 2 J321.2 DN 150 mm x 100 mm All Flanged Tee (Steel) Nr 0 J321.3 DN 150 mm x 50 mm All Flanged Tee (Steel) Nr 1 J621.4 OD 160mm x OD 75mm HDPE Tee Nr 6 J621.5 OD 160mm x OD 63mm HDPE Tee Nr 6 J621.6 UPVC DN300mm x HDPE OD 160mm Nr 2 J621.7 UPVC DN300mm x HDPE OD 63mm Nr 2 J621.8 OD 110mm x OD 63mm Nr 5 J621.9 OD 63mm x OD 32mm Nr 2 J621.10 OD 75mm x OD 75mm (Equal Tee) Nr 2 J621.11 OD 63mm x OD 63mm Nr 3 J34 <u>Mechanical Joints (Couplings) (Provisional)</u> <i>(Rate to include stainless steel bolts and nuts)</i> J341.1 DN 100mm transition step down ferrous coupling to join HDPE pipe with steel pipe nr 0 J341.3 DN 150mm transition step down ferrous coupling to join HDPE pipe with steel pipe nr 1 J342 DN 200mm transition step down ferrous coupling to join HDPE pipe with steel pipe nr 0 J35 <u>Ferrous Flanged Adaptor (Provisional)</u> <i>(Rate to include stainless steel bolts and nuts)</i> J351.1 DN 100mm ferrous flanged adaptor nr 0 J351.2 DN 150mm ferrous flanged adaptor nr 1 J352 DN 200mm ferrous flanged adaptor nr 0 <u>Valves</u> Supply, handle, deliver to site, fix in place and test inclusive of all fittings as in the Standard drawings . Valves to BS 5163 and EN 1074 Standards. Rate for valves shall also include for all necessary fittings (Tees, Spigot pipes etc) as per drawings <u>Air-Valves</u> <i>Air Valves shall be Anti shock combination air valves, with a built in anti-water hammer non slam surge prevention system.To include an isolation valve.of DN 50 mm</i> J861.1 PN 16 DN 50 mm nr 1				

PAGE TOTAL CARRIED TO BILL 2.1.8 COLLECTION PAGE					
BILL 2.8.1.1 - WATER PIPELINES					
	Washout valves				
	<i>Gate valve for washout to be supplied with an extension spindle n.e. 2m and a Tee Key. Rate to include invert tee and extension pipe to drain</i>				
J891.1	DN 50 Washout Valve on OD 160mm pipe	nr	1		
J891.2	DN 50 Washout Valve on OD 110mm pipe	nr	0		
	<u>Line Gate Valves (Flange)</u>				
J811.1	DN 150 mm	nr	5		
J811.2	DN 100 mm	nr	0		
J811.3	DN 50 mm	nr	5		
J811.4	DN 63 mm	nr	7		
	<u>Water Meters</u>				
	MultiJet bulk cold water meters. Water meters to be as specified in Clause 404.10 of the specifications				
J911.1	DN 50mm	nr	0		
J911.2	DN 100mm	nr	0		
J911.3	DN 150mm	nr	2		
J911.4	DN 63mm	nr	0		
	<u>Fire Hydrant</u>				
	<i>Supply, deliver, install, connect and test</i>				
	<i>Rate to include Tee and associated fittings</i>				
J911.1	DN 65 mm	nr	2		
	<u>ANCILLARY WORKS</u>				
	Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings.				
	<u>Note:-</u> Items for work in this class shall include:- - Excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, masonry blocks, reinforcement, formwork, joints and finishes. - Tips for disposal of excavated material or debris to be identified by the Contractor in liaison with the Local Authority.				
	<u>In Situ Chambers</u>				
	Provide all materials and construct Valve chamber internal dimensions 1200mm x 1200mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing				
K112.1	Depth: not exceeding 2.0 m	nr	19		
PAGE TOTAL CARRIED TO BILL 2.1.8 COLLECTION PAGE					

BILL 2.8.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>Road Crossings</u>				
	- <i>Extra-overs for normal pipe laying for road crossing works: to include breaking up and permanent reinstatement of roads and provision of a sleeve as per standard drawings</i>				
K731.1	Pipe bore: 200 mm on gravel road	m	0		
K731.2	Pipe bore: n.e. 150 mm on gravel road	m	400		
K691	Microtunnel to facilitate passage of pipeline below tarmac roads as approved by the roads authorities . Rate to include installation of a sleeve and all required fittings & Anchor blocks and provision of Safety Measures Pipe bore n.e. 200 mm	m	21		
	<u>Other Crossings</u>				
K642	Crossing Hedge, pipe bore not exceeding 110mm	m	20		
K662	Crossing Fence, pipe bore not exceeding 110mm	m	20		
K672	Crossing existing sewer or drain, pipe bore not exceeding 110 mm	m	20		
	<u>River Crossings</u>				
	<i>Rate to include provision of all materials, shoring and dewatering and laying of HDPE Sleeve with the necessary ancillary works such as bedding concrete/anchors and couplings as required for a river undercrossing in accordance with the standard drawings</i>				
K621.1	River width between 3 - 10 m. Pipe bore:n.e.150 mm	m	0		
K621.2	River width between 3 - 10 m. Pipe bore:200 mm	m	0		
	<u>Marker Posts</u>				
	- <i>Provide and install RC standard marker posts for:</i>				
K82.1	Air Valves inscribed AV	nr	0		
K82.2	Washouts, inscribed WO	nr	0		
K82.3	Sluice Valves, inscribed SV	nr	17		
K82.4	Along Pipeline at 300 m spacing and at change of directions , inscribed "MAJI" and Diameter of the Pipeline	nr	14		
K82.5	Fire Hydrant marker, inscribed FH	nr	12		
	<u>CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u>				
	<i>Extras over excavation and backfilling for excavation in Rock. Rate to include carting away and disposal. In pipe trench and chambers (Provisional).</i>				
L111.1	Excavation in trench for rock class "A"	m ³	98		
L111.2	Excavation in trench for rock class "B"	m ³	98		
L111.3	Excavation in trench for rock class "C"	m ³	98		
	Note:- Blasting is NOT permitted for Item L11				

	PAGE TOTAL CARRIED TO BILL 2.1.8 COLLECTION PAGE				
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BILL 2.8.1.1 - WATER PIPELINES

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<p>-</p> <p>Imported Granular Fill (Provisional)</p> <p><i>Provide, transport to site and place imported granular material and compact in bed (100 mm thick) and surround to pipes (200 mm thick) as directed/approved by Engineer</i></p>				
L531	Surround To pipes nominal bore: n.e. 150 mm	m	980		
L54	Mass Concrete Surround (Provisional)				
L551	150mm thick Mass Concrete Surround Class 15/20 to pipe as per Standard Drawings at locations directed by the Engineer. Rate to include for formwork, supports, vibrating, etc.	m	294		
	<p>Concrete Support, Thrust Blocks and Anchor Blocks</p> <p><i>Anchor/Trust blocks (as per Standard drawings)</i></p>				
L711.1	Volume n.e. 0.5 m3	nr	31		
	<u>CLASS X:- MISCELLANEOUS</u>				
X51	Supply and install with item decypted before, tracable warning tape, permanently imprinted with= "CAUTION WATER PIPE", color= blue, width= 50mm, thickness= 5mm.	m	4,084		
PAGE TOTAL CARRIED TO BILL 2.1.8 COLLECTION PAGE					

BILL 2.8.1.1 - WATER PIPELINES

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	- BILL SUMMARY PAGE				
1	From page 1				
2	From page 2				
3	From page 3				
4	From page 4				
5	From page 5				
BILL 2.1.8 TOTAL CARRIED TO BILL 2.1 SUMMARY PAGE					

BILL 2.8.1.2 - CONSUMER CONNECTIONS					
ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSH)	AMOUNT (KSH)
9.3	Last Mile Water connections are limited by the connections identified by the employer. The Contractor to confirm with Resident Engineer the exact number of connections and their locations before ordering materials and carrying out any works under this Bill.				
CLASS I	Typical 1 connection PIPEWORK- PIPES Provide, lay and joint HDPE PN16 pipes, PE 100. Rate to to include excavation and backfilling of trenches, depth not exceeding 1.5 m. Include for preparation of trench surfaces; upholding sides of the excavation, disposal of excess excavated material, removal of dead services except to the extent that such work is included in classes J, K and L				
I14*					
I411	Nominal bore 15mm inclusive of valve sockets	m	6		
CLASS J	PIPEWORK- FITTINGS AND VALVES Provision and installation of fittings and valves Junctions and branches - Tees or Saddles <i>One size per connection as directed by the Engineer</i>				
321.1	DN 37 x 15 threaded branch	Nr	0		
321.2	DN 40 x 15 threaded branch	Nr	0		
321.3	DN 50 x 15 threaded branch	Nr	0		
321.4	DN 63 x 15 threaded branch	Nr			
321.5	DN 75 x 15 threaded branch	Nr	0		
321.6	DN 90 x 15 threaded branch	Nr	0		
321.7	DN 100 x 15 threaded branch	Nr	0		
321.8	DN 125 x 15 threaded branch	Nr	0		
321.9	DN 150 x 15 threaded branch	Nr	0		
321.1	DN 200 x 15 threaded branch	Nr	1		
	Double collars/ Couplings <i>One size per connection as directed by the Engineer</i>				
J341	For GI pipe nominal bore (37mm)	Nr	0		
J342	For GI pipe nominal bore (40mm)	Nr	0		
J343	For GI pipe nominal bore (50mm)	Nr	0		
J344	For GI pipe nominal bore (63mm)	Nr	0		
J345	For GI pipe nominal bore (75mm)	Nr	0		
J346	For GI pipe nominal bore (90mm)	Nr	0		
J347	For GI pipe nominal bore (100mm)	Nr	0		
J348	For GI pipe nominal bore (125mm)	Nr	0		
J349	For GI pipe nominal bore (150mm)	Nr	0		
J350	For GI pipe nominal bore (200mm)	Nr	2		
	Bends/ elbows J411 Nominal bore 15mm	Nr	5		
	Gate valves to BS 5163, PN 16, flanged to BS 4772 J811.1 Nominal bore 15mm J811.2 Stop cork tap nominal bore 15mm J811.3 Water meter DN 15 mm	Nr	2		
		Nr	1		
		Nr	1		
	CLASS K : PIPEWORK- MANHOLES AND PIPEWORK ANCILLARIES K651 Allow for crossing existing boundary wallls, including reinstatement to origanl state. Nominal n.e. 20mm	Nr	1		
	PAGE TOTAL CARRIED TO BILL 2.1 COLLECTION PAGE				

ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (KSH)	AMOUNT (KSH)
K661	Allow for crossing existing fences (chain link, barbed wire, hedge etc.) including reinstatement to original state. Nominal bore n.e 20mm	Nr	1		
K671	Allow for sewer/ drain crossings	Nr	1		
K678	Allow for underground telephone and power services crossings	Nr	1		
K731	Allow for breaking, and temporary and permanent reinstatement of murram roads	m	3		
K741	Allow for breaking up, temporary and permanent reinstatement of murram foot paths	m	3		
K810	Allow for reinstatement of drains	m	1		
K861	Allow for connection to mains	Nr	1		
K861	Allow for installation of prefabricated Meter box	Nr	1		
	CLASS L: PIPEWORK- SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION				
L11	Excavation in rock various classes (0.045m3/m)	m3	0.25		
	Total a Typical Water Connection				
	Total Amount for ALL Connections Proposed		50		
BILL 2.1.8 TOTAL CARRIED TO BILL 2.1 SUMMARY PAGE					

<u>BILL 4.1.- COLLECTION PAGE</u>		
ITEM	DESCRIPTION	AMOUNT (KShs)
	BILL 2.1 COLLECTION PAGE TOTAL BILL 2.1.8.1 - WATER PIPELINES TOTAL BILL 2.1.8.2 - WATER CONSUMER CONNECTIONS	
BILL 2.1 TOTAL CARRIED TO BILL 4 SUMMARY PAGE		

<u>BILL 2.1.- COLLECTION PAGE</u>		
ITEM	DESCRIPTION	AMOUNT (KShs)
	BILL 2.1 COLLECTION PAGE TOTAL BILL 2.1.1 - WATERLINES TOTAL BILL 2.1.2 - WATER KIOSKS TOTAL BILL 2.1.3 - BOREHOLE EQUIPPING TOTAL BILL 2.1.4 - REHABILITATION OF ELEVATED TANKS TOTAL BILL 2.1.5 - ELEVATED TANK (PROVISIONAL ITEM) TOTAL BILL 2.1.6 - WATER POINTS (PPDs) TOTAL BILL 2.1.7 - SOLAR SYSTEM WORKS TOTAL BILL 2.1.8 - GITHOGORO WATER COMPONENT	
BILL 2.1 TOTAL CARRIED TO BILL 2 SUMMARY PAGE		

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements BILL 2. MJI WA HURUMA SETTLEMENT					
BILL 2.2: SANITATION WORKS					
BILL No 2.2.1: LARGE ABLUTION BLOCK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<p>The Quantities given under this Bill are for 1 No. Ablution Block.</p> <p><u>D</u></p> <p><u>DEMOLITION AND SITE CLEARANCE</u></p> <p>Demolition and removal of natural and artificial articles, objects and obstructions which are above the Original Surface</p> <p><u>1</u></p> <p><u>SUBSTRUCTURES</u></p> <p>-</p> <p><u>SITE CLEARANCE & TOP SOIL STRIPPING</u></p> <p>D114 Clear area around the site of all grass, bushes, shrubs, hedges, grub up roots and cart away to tips as directed by the Engineer</p> <p>D211 Cut down trees, grub up roots. Girth n.e. 1.2m (Provisional)</p> <p><u>E</u></p> <p><u>EXCAVATION</u></p> <p>The rates shall include for all strutting, shuttering, stabilising the excavation faces, and keeping the excavation free of water by pumping, bailing or other means and disposal of excavated material to approved tips</p> <p>-</p> <p>E225 Excavate and cut away the present solid waste material to allow for excavation from the top soil level</p> <p>-</p> <p>E310 Strip top soil 200 mm thick</p> <p>E342 Excavate below stripped level to formation level in normal material.. Maximum depth n.e. 1.0 m</p> <p>E344 -Ditto- but maximum depth 1.0 m to 2.0 m</p> <p><u>Extra Over to Excavation For:- (Provisional)</u></p> <p>-</p> <p>E435.1 Excavating in rock Class "A"</p> <p>..</p> <p>E435.2 Excavating in rock Class "B"</p> <p>E435.3 Excavating in rock Class "C"</p>				
PAGE TOTAL CARRIED TO BILL 2.2.1 COLLECTION PAGE					

BILL No 2.2.1: LARGE ABLUTION BLOCK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
E611	<p><u>Approved Selected Filling as Described:-</u></p> <p>Fill and ram selected excavated materials</p> <p><u>Filling</u></p> <p>-</p> <p><u>To include packing/ placing and compaction as specified.</u></p>	m ³	42.78		
E615.1	<p>-</p> <p>300mm Hardcore</p>	m ³	13.10		
E615.2	<p>50mm stone dust blinding to hardcore</p> <p>-</p> <p><u>Anti-Termite Treatment</u></p> <p>-</p> <p>Chemical anti-termite treatment to surface of filling with an approved insecticide</p> <p>-</p> <p><u>Damp-proof Membrane</u></p> <p>-</p> <p>1000 Gauge polythene sheeting, laid over hardcore</p>	m ³	0.69		
U492.1	<p>-</p> <p>Chemical anti-termite treatment to surface of filling with an approved insecticide</p> <p>-</p> <p><u>Damp-proof Membrane</u></p> <p>-</p> <p>1000 Gauge polythene sheeting, laid over hardcore</p>	m ²	69.03		
U492.2	<p>-</p> <p>1000 Gauge polythene sheeting, laid over hardcore</p>	m ²	69.03		
F	<u>Concrete Work:</u>				
F511	<p><u>Provide and Place Mass concrete Class 15/20</u></p> <p>75mm Blinding</p> <p><u>Provide and Place structural concrete Class 25/20</u></p> <p>-</p> <p>Strip foundation</p>	m3	3.84		
F622	Strip foundation	m3	10.03		
F621	150mm Thick floor and roof slab	m3	14.45		
F662	Bases, Column and Beams	m3	12.74		
G	CLASS G: CONCRETE ANCILLARIES				
G243.1	<p><u>Formwork</u></p> <p>Vertical sides of strip Footing 200mm wide</p>	m2	33.44		
G242.1	<p>Vertical edges of floor slab 150mm wide</p> <p><u>Reinforcement</u></p> <p>BRC mesh fabric reinforcement ref A142 (weighing 2.2kg/m2) laid in Floor slab (measured net-no allowance made for laps)</p> <p>Provide and Fix High Tensile Steel Reinforcement to SRN 127 including Cutting, Bending, Propping with Spacers and Tying as Specified :-</p>	m2	7.36		
G562	<p>BRC mesh fabric reinforcement ref A142 (weighing 2.2kg/m2) laid in Floor slab (measured net-no allowance made for laps)</p> <p>Provide and Fix High Tensile Steel Reinforcement to SRN 127 including Cutting, Bending, Propping with Spacers and Tying as Specified :-</p>	m2	78.43		
G540	Reinforcement, all diameters	kg	1,800.00		
PAGE TOTAL CARRIED TO BILL 2.2.1 COLLECTION PAGE					
BILL No 2.2.1: LARGE ABLUTION BLOCK					

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
U	CLASS U; MASONRY <u>Stone walling of minimum compressive strength of 10N/mm² bedded in cement sand (1:3) mortar reinforced with and including gauge 12 hoop soft wire gauge hoop iron at every alternate course. Keying to be done on exterior wall surfaces for the superstructure</u>				
U821	200mm Substructure walling	m ²	104.50		
W	CLASS W; WATER PROOFING <u>Damp-proof course:</u> Bituminous felt damp-proof course as described:-				
W131.1	200mm Wide under walls	m	70.00		
W131.2	150mm Wide under walls	m	19.00		
2	<u>SUPERSTRUCTURE</u>				
F	<u>CONCRETE</u> - <u>Provide and Place structural concrete Class 25/20</u>				
F855.1	Columns and beams	m ³	4.00		
F885.2	300mm thick, 500mm wide raised plinth in shower units for dressing area	m ³	0.21		
G	CLASS G: CONCRETE ANCILLARIES FORMWORK <u>Sawn formwork (fair finish) to: -</u>				
G242.1	Vertical and soffits of slabs	m ²	15.28		
G242.2	Vertical sides and Soffit of beams, columns and fetching bay	m ²	16.73		
	<u>Reinforcement</u> <u>Provide and Fix High Tensile Steel Reinforcement to SRN 127 Including Cutting, Bending, Propping with Spacers and Tying as Specified :-</u>				
G540	Reinforcement, all diameters	kg	1,023.47		
	<u>Joints</u>				
G6	Extra over walling for ruled horizontal and flush vertical joints	m ²	92.42		
PAGE TOTAL CARRIED TO BILL 2.2.1 COLLECTION PAGE					

BILL No 2.2.1: LARGE ABLUTION BLOCK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
G8	<u>FINISHES</u> <u>FLOOR FINISHES</u> <u>Coloured Ceramic Floor Tiles from Saj Co. as supplied by M/s Tile & Carpet Centre, or other equal and approved</u>				
G811.1	300 x 300mm ceramic Tiles laid on screed (measured separately) and joints filled in approved filler to match colour of tiles (Saj or similar approved) <u>Screeds</u> Bonded cement and sand (1:4) screed bed in one coat, well bonded to concrete base as described:-	m2	69.00		
G812.1	38mm Thick screed laid level to receive floor tiling (measured separately) Bonded cement and sand (1:4) screed bed in one coat with approved hardener incorporated in the mix, well bonded to concrete base as described:-	m ²	69.00		
G812.3	12mm (minimum) Thick screed laid level to receive ceramic wall tiles (measured separately) <u>PLASTERING</u> <u>12.5mm Thick Gauged Cement Plaster as Described Internally on :-</u>	m ²	175.00		
G812.4	Blockwork and concrete surfaces	m ²	279.00		
O	<u>CLASS O; MISCELLANEOUS ROOFING</u> <u>Sawn Cypress Grade II Maximum Moisture Content 12% Seasoned and Pressure Impregnated with Wood Preservative and Timber Joints with Bolted and Nailed Connections to the Engineer's Approval:-</u>				
O117.1	150 x 50mm Intermediate rafters	m	90.00		
O117.2	150 x 50mm Struts	m	66.61		
O117.3	150 x 50mm Tie beam	m	48.50		
O117.4	75 x 50mm Purlins	m	56.21		
O117.5	100 x 50mm Wall plate tied to wall with 20 s.w.g. hoop iron at 900mm centres and bedded in cement mortar (1:4) on top of wall	m	12.60		
O117.6	Scarfed joint to 150 x 50mm timber member	nr	20.00		
PAGE TOTAL CARRIED TO BILL 2.2.1 COLLECTION PAGE					

BILL No 2.2.1: LARGE ABLUTION BLOCK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>Sundries</u>				
O117.7	Bed wall plate in cement mortar (1:4)	m	12.60		
	<u>General Timbers</u>				
	Wrot Prime Grade Cypress, Including Finishing With Three Coats First Quality Gloss Paint :-				
O117.8	250 x 40mm Fascia board	m	15.00		
O117.9	Tongue & Groove (T&G) Boarding on underside of roof overhang, including provision of roof venting holes with gauze.	m ²	22.50		
W321.1	coloured iron sheet (G28) Roof covering fixed to timber purlins	m ²	84.32		
	<u>CEILING</u>				
	<i>9mm Thick flowered ceiling chip boards Fixed to and Including 50 x 50mm Sawn Cypress Grade 2 Battens at 600mm Centres in Both Directions Complete with Gauge Jointing Material</i>				
Z452.1	Horizontal ceiling fixed to underside of trusses	m ²	57.23		
Z452.2	12mm Cornice 50mm high, plugged	m	139.60		
Z452.3	Extra over ceiling lining for forming removable access trap door size 600 x 600mm with 100 x 38 mm sawn treated cypress trimming joists between tie beams, 120 x 20mm (finished) wrot cypress frame all round and 20mm blockboard removable panel set loose on top of framing	nr	2.00		
U	CLASS U; MASONARY				
	<u>Solid Concrete Block Walling With Concrete Blocks to BS 2028, Type "A" with Minimum Crushing Strength of 3.7N/mm² at 28 Days, Reinforced with 20 swg Hoop Iron at alternate course, and Bedded, Jointed and Pointed in Cement Mortar (1:4):-</u>				
U111.0	150mm Thick walling	m ²	19.00		
U111.1	200mm Thick walling	m ²	70.00		
	CLASS V; PAINTING				
V553.1	Apply three coats of plastic emulsion paint on plastered internal walls.	m ²	104.85		
V553.2	Apply three coats of plastic water paint on plastered external Beams, Columns and Plinth	m ²	34.32		
V3	Allow a PC sum for branding and paintworks with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	PC			
PAGE TOTAL CARRIED TO BILL 2.2.1 COLLECTION PAGE					

BILL No 2.2.1: LARGE ABLUTION BLOCK						
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)	
N531.1	Internally on:-Wall Tiles Coloured Ceramic Wall Tiles from Saj Co. or other equal and approved 200 x 300mm Thick coloured wall tiles laid on backing (measured separately) and joints filled in approved filler to match colour of tiles	m ²	175.00			
	Sundries PVC tiling edge to external corners of tiles (Provisional)	m	139.60			
X2	CLASS X; MISCELLANEOUS WORK METALWORK Steel Doors Pressed Metal Louvre Doors Supply and Fix the following Pressed Metal Louvre Doors with 100 x 50mm Stiles and Top Rails, 150 x 50mm Middle and Bottom Rails With Pressed Metal Infill Louvres and 100 x 50mm Pressed Metal Frames, Including Hinges, Pad Bolts and Tower Bolts, All To Manufacturer's Details, with three coats gloss paint complete with Opening Accessories Including Bedding and Pointing Around Frames in Cement Mortar:-					
	Single door size 900 x 2400mm high (D2)	nr	3.00			
Z323.1	Barrier at the front service area Metal sheet window for the front opening, 2mm thick. The metal window should have a mechanism for fully lifting to open during operating hours and easy to lock when required.	m ²	1.40			
X3.4	<i>Supply and Fix the following purpose made steel Louvred windows manufactured from heavy duty standard sections primed with one coat of red oxide primer and fixing to masonry or concrete head and jambs complete with closing mechanism and other fittings.</i>					
Z321.1	Window size 650x850 mm high overall	nr	2.00			
Z321.2	Window size 1000x1400 mm high overall	nr	3.00			
Z321.3	Window size 650x2000 mm high overall	nr	6.00			
X7	TIMBER DOORS Door Frame Wrot Cypress Door Frames size 100 x 50mm with a suitable rebate to receive hinged door panel, including suitable mild steel clamps fixed to back of frame and fixing to door opening size and all necessary woodwork finishes (prepare, knot, prime, stop and apply two undercoats and one finishing coat hard gloss paint to woodwork):-					
	Frame to fit door opening 900mm wide x 2400mm high	nr	4.00			
Z314	Frame to fit door opening 700mm wide x 2400mm high	nr	6.00			
Z314.1	Doors Supply and Fix 50mm Thick Prime Grade Cypress Panelled Door With 50 x 100mm Stiles and Top Rails, 50 x 150mm Middle and Bottom Rails and Infill Panels in 50 x 100mm T & G battens. Rate to include for 3 Nr 100mm steel heavy duty washered butt hinges, three lever mortice lock as 'Union Ref:2237' with a set of aluminium lever handles as 'Union' Ref.681-06-02 and rubber door stop and three coats of gloss paint complete with bedding and pointing around frames in cement mortar. (See Door Details in Standard Drawings):-					
PAGE TOTAL CARRIED TO BILL 2.2.1 COLLECTION PAGE						

BILL No 2.2.1: LARGE ABLUTION BLOCK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
Z313.1	Door size 900 x 2030 mm high with 890 x 140mm Georgian wired clear glass view panel	nr	4.00		
Z313.4	Door size 700 x 2030 mm high with 690 x 140mm Georgian wired clear glass view panel	nr	6.00		
Z313.2	Supply and fix Stainless steel buffer coat hooks	nr	13.00		
Z313.3	Supply and fix 100mm D-pull handles	nr	10.00		
X9	<u>PLUMBING AND DRAINAGE</u> Allow for cutting and leaving all necessary holes, notches, mortices, sinkings and chases both in the structure and its finishes and for all making good in connection with the following (All Provisional): -				
X93.1	White vitreous china squatting level washdown W.C. suite complete	nr	6.00		
X93.2	White vitreous china washbasin complete	nr	6.00		
X93.3	Shower unit complete	nr	2.00		
X93.4	Mirror size 3000 x 600mm	nr	2.00		
X93.5	Toilet roll holder	nr	8.00		
X93.6	Recessed soap tray	nr	2.00		
PAGE TOTAL CARRIED TO BILL 2.2.1 COLLECTION PAGE					

BILL No 2.2.1: LARGE ABLUTION BLOCK					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
X93.7	Chrome plated shower rail size 25mm diameter x 900mm long complete with fixtures	nr	2.00		
X93.8	Close coupled water closet with cistern comprising WC bowl with horizontal outlet with S trap outlet connector, cistern with fittings & CP , seat & cover. Include for grab rails (handles) for support to persons with physical disabilities.	nr	2.00		
	<u>Sanitary Appliances</u> All sanitary appliances shall be supplied and installed as complete units with all fittings, fixtures , pipework to manholes, waste grits & traps and shall be as specified or approved equal. Rate to include for all 25 - 50mm dia pipework (PPR and GI pipes), Gate Valves and Taps (Pegler type, English) and connection to water supply and connection to foul water drainage System.				
X33.1	White vitreous china squatting level wash down Water Closet suit complete with high level 6 litre cistern and flush pipe.	nr	6.00		
X33.2	Urinal bowl with urinal automatic flushing system complete with cistern and flush pipes	nr	3.00		
X33.3	Wall mounted washbasin as "Twyfords Entice 575" with one tap & 32mm waste grit *basin mixer as "Europath Astra" with aerator & pop -up waste.*32mm CP bottle trap with tail pipe, cap-nut & wall flange as "Cobra" 340 & C-342/1/2/3	nr	6.00		
X33.4	Shower unit complete with shower head and all taps and connections to water tank and connection to foul water drainage	nr	2.00		
X33.5	White vitreous china 1000mm x 1000mm basin	nr	2.00		
X33.6	Mirror size 3000 x 600mm plugged and screwed to wall with chromium plated domed screws complete with 5mm thick foam back rest.	nr	2.00		
	<u>Foul/Waste drainage</u>				
I513.1	Provide, lay and joint uPVC pipes golden brown Class 41 160mm diameter. Include for all fittings and connections to inspection chambers.	m	35.00		
I513.2	Supply and lay DN 200 mm DWC pipes to a nearby manhole. The rate to include excavation in normal material and tie-in works.	m	20.00		
	<u>Inspection Chambers</u>				
X95	Excavate for, provide all materials,special shuttering e.t.c and construct 600 x 450mm internal dimentions in situ concrete inspection chambers on sewers diameter 160mm.Include for building in pipes,forming benching to falls,medium duty fibre reinforced frame and cover, depth n.e. 1.5m.	nr	6.00		
	<u>WATER SUPPLY</u>				
X95.1a	Allow a provision for providing all materials and connecting the Ablution Block to existing water supply sytem, using HDPE or PPR pipe, diameter n.e. 32 mm. Include for installation of a water meter, gate valve, etc.	m	30.00		
X95.1b	Allow a provision for providing all materials and installation of pipework and fittings for a water selling point. Include water meter, valves, draw-off fittings. All pipes to be of GI material. In accordance with Standard drawing for Water Kiosk	nr	1.00		

		PAGE TOTAL CARRIED TO BILL 2.2.1 COLLECTION PAGE			
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
X95.1c	Supply and installation of the 5000 litres capacity of approved water tank complete with provisions for inlet pipe, outlet pipe, overflow pipe and drain pipe to site drainage and requisite chambers. The rate to also include for ball valve 32mm diameter medium pressure ball valve as "PORTSMOUTH" type or approved equivalent with brass stem and plastic float, screwed to threaded socket of tank including union. Provide and install burglar proofing with mild steel frame around the tank	nr	2.00		
	<u>ELECTRICAL WORKS</u>				
A321.1	Allow a Provisional Sum of Kshs. 250,000 for installation of a solar power system.	P.S	1.00		
A321.2	Allow for all electrical wiring works including switches, sockets circuit breakers, bulb holders etc.	LS	1.00		
A321.3	Supply and install IP-66 outdoor flood LED light .The item includes PVC conduits,with IP-65 J.bboxes, fixing screws (Galv.) and 3x4mm2 cables between fixtures and all necessary equipment for installation and operation as per drawings, specifications and engineer instructions	nr	5.00		
	<u>Others</u>				
A311.1	Allow a Provisional Sum of Kshs. 100,000 for provision and installation of furniture for the Ablution Block Office including cleaning Equipment.	P.S	1.00		
	SEPTIC TANK				
X.4	Allow a PC sum for provision of all materials and construction a 107m³ two compartment Septic Tank of dimensions 9m x 5m x 2.5m and a circular soakage pit of diameter 2m; including manholes, covers, pipework, radial drains, vent pipes, connections etc as per details shown on Standard Drawings.	Lump sum	1		
	Ablution block Access Road				
	<i>Rate to include site clearance, earthworks, and finishes</i>				
R 114	Construct a 3 m wide gravel all- weather road to the Ablution block. The top surface to be hard granular lateritic material of thickness 300 mm compacted in 2 layers, in accordance with specification and drawings. Provide side storm water drain with IBDs, depth at least 450 mm	m	115		
PAGE TOTAL CARRIED TO BILL 2.2.1 COLLECTION PAGE					

<u>BILL 2.2.1 SUMMARY PAGE</u>					
1	From page 1				
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7	From page 7				
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9	From page 9				
10	From page 10				
	Total for 1 No. Ablution Block (Large)				
	BILL 2.2.1 TOTAL CARRIED TO BILL 2.2 COLLECTION PAGE				

BILL No 2.2.2: BIO CENTRE REHABILITATION				
X.2	BIOCENTER REHABILITATION Allow a Provisional Sum of KSh 2,000,000.00 for condition assessment of existing biocenter and undertaking necessary repairs to restore optimal functionality, supply and installation of 1 No. 10,000 litres tank. Works to be carried out by a reputable specialised sub-contractor. approved by the Resident Engineer.	PS		
	BILL 2.2.2 TOTAL CARRIED TO BILL 2.2 COLLECTION PAGE			

Bill 2.2.3: Githogoro Bio-centres**Bill NO. 2.2.3: PROPOSED BIO-CENTRE DEVELOPMENT**

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	SUBSTRUCTURES				
	CLASS B: SITE INVESTIGATION				
B111	Trial Holes where ordered to prove location, construction size etc of pipelines, services or existing structures, ground conditions. 1.2-3m (Provisional)	nr	3		
	CLASS D - DEMOLITION AND SITE CLEARANCE				
D100	Clear area within the site of all grass, bushes, shrubs, hedges, grub up roots and cart away to tips as directed by the Engineer	m ²	60		
D210	Cut down trees and removal of trees and stumps, girth 0.5-1m (Provisional)	Nr	1		
D461	Demolition and relocation of existing structures (Provisional)	m ²	60		
	CLASS E: EARTHWORKS				
E411	Excavate over site for buildings, roads, etc. average 150mm deep to remove vegetable soil and stack part of material for use as and where directed by the Engineer, cart away surplus to tips	m ²	60		
	The rates shall include for all strutting, shuttering, stabilising the excavation faces, and keeping the excavation free of water by pumping, bailing or other means				
E211.1	Excavate below stripped level to formation level in common material, part backfill after construction and remainder, cart away to tips or use as fill on site, all as directed by the Engineer. Maximum depth n.e. 1.0 m	m ³	45		
E211.2	-Ditto- but maximum depth 1.0 m to 2.0 m	m ³	45		
E211.3	-Ditto- but maximum depth 2.0 m to 3.0 m	m ³	45		
E211.4	-Ditto- but maximum depth 3.0 m to 4.0 m		45		
E211.5	-Ditto- but maximum depth exceeding 4.0 m	m ³	25		
E211.6	Foundations and bases of isolated piers and walls 0.00 - 1.50 metres deep	m ³	60		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 1 PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>Extra Over Excavation in any Position For:- (Provisional)</u>				
E233	Excavating in soft rock	m ³	2		
E234	Excavating in hard rock	m ³	8		
	Filling Includes placing and compacting as specified.				
E635	Fill and ram selected excavated materials around foundations and buildings	m ³	20		
	Approved Hardcore Filling as Described:-				
E636	300mm thick selected hardcore/Murram fill to make - up levels, well rolled smooth and compacted to receive polythene Dpm.	m ²	60		
E637	Provide, lay and level out fine crushed stone, sand or gravel blinding 50mm thick to surface of filling, including watering and rolling to achieve satisfactory compaction	m ²	60		
	Disposal of Surplus Spoil:-				
E530	Top soil, normal soil, rock and artificial hard material to a county council's dumpsite. Haulage distance exceeding 5km. (Provisional)	m ³	245		
	CLASS W: WATERPROOFING				
	Damp-proof Membrane				
W153	Supply and lay 1000 gauge polythene sheet DPM sheet over hardcore	m ²	65		
	Anti-Termite Treatment				
X9.2	Supply and application of Termidor 25EC pesticide treatment for the control of termites to the soil beneath the foundations, executed by a Pesticides Control Products Board licenced professional pest control operator, with a ten year guarantee to surfaces of excavations	m ²	65		
	CLASS F: CONCRETE WORK				
	Mass Concrete Class 15/20mm Maximum Aggregate as Described in:-				
F511	50mm Thick blinding under foundation concrete, column bases or over hardcore	m ³	4		
	Reinforced Concrete Class 25/20mm Maximum Aggregate as Described in:-				
F621	Foundation trenches, column bases and entrance steps	m ³	10		
F622	150mm Thick foundation and ground floor bed	m ³	18		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 1 PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
F623	Ground level beam and foundation beams	m ³	4		
F624	150mm Thick ramp laid to slope not exceeding 15 degrees from horizontal at entrance	m ²	4		
F625	Extra over concrete for tamping whilst still green to make ribbed finish	m ²	4		
	Reinforced Concrete Class 25/20mm Maximum aggregate as Described in:-				
F626	Isolated columns and piers in foundations	m ³	4		
	<u>CLASS G: CONCRETE ANCILLARIES</u>				
	Fabric Reinforcement No. A142 Mesh Size 200 x 200mm Weighing 3.95 kgs Per m², Including Bends, Tying Wire and Distance Blocks:-				
G562	Fabric reinforcement with minimum 200mm wide side and end laps, laid in bed	m ²	50		
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 including Cutting, Bending, Propping with Spacers and Tying as Specified :-				
G522	Reinforcement, all diameters	Kg	2,170		
	Formwork				
	Provide and Fix Shuttering Including Propping, Strutting and Striking, all as Specified				
	Sawn Formwork - Class F1 Finish:-				
G242.1	Vertical sides of column bases, columns, sides of foundations and steps in foundations	m ²	140		
	Wrot Formwork - Class F3 Finish:-				
G242.2	Edges of beds, pavings, plinths and risers of steps not exceeding 300mm wide	m ²	10		
	<u>CLASS U: MASONRY</u>				
	Walling. Supply, jointing with Cement Mortar (1:3) or otherwise specified, including reinforcing with 20 swg Hoop Iron at alternate course.				
	Foundation/ Sub structure walling-				
U821	Supply, joint with sand cement motar 200mm thick Load bearing Natural Stone masonry walling as specified in the drawings.Stone dressing to be specified and approved by the Engineer. Minimum compressive strength of 10N/mm2	m ²	150		
	Solid Concrete Block Walling With Concrete Blocks to BS 2028, Type "A" with Minimum Crushing Strength of 3.7N/mm² at 28 Days, Reinforced with 20 swg Hoop Iron at alternate course, and Bedded, Jointed and Pointed in Cement Mortar (1:4):-				
U822	200 mm Walling	m ²	30		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 1 PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
G812.1	Wall finishes Supply and place sand cement motar mix ratio 1:3, 12mm thick for all internal wall plastering to detail.	m ²	100		
G812.2	Supply, prepare and apply three coats of bituminous paint as instructed rendered to ground floor soffit plinths and internal walls	m ²	150		
	CLASS W: WATERPROOFING Damp-proof course: Bituminous felt damp-proof course as described:-				
W153	Supply and install approved bituminous felt damp proof course 200mm Wide under walls. 150 mm laps ; horizontal, 1 no. layer, bedded in cement sand (1:3)mortar	m	60		
W193	Ditto 100mm Wide under walls	m	20		
	<u>DOME</u> - CLASS F: CONCRETE WORK Supply and Place Reinforced Concrete Class 25/20mm Maximum Aggregate as Described in:-				
F523	Curved surfaces.	m ³	22		
	Solid Concrete Block Walling With Concrete Blocks for dome to BS 2028, Type "A" with Minimum Crushing Strength of 3.7N/mm² at 28 Days, Reinforced with 20 swg Hoop Iron at alternate course, and Bedded, Jointed and Pointed in Cement Mortar (1:4):-				
	<u>CLASS U: MASONRY</u>				
U823	100 mm Walling	m ²	110		
	Wall finishes				
G812.1	Supply and place sand cement motar mix ratio 1:3, 12.5mm thick for all wall plastering to detail.	m ²	220		
	- <u>CLASS G: CONCRETE ANCILLARIES</u> Wrot Formwork - Class F3 Finish:-				
G211	For all concrete works	m ²	210		
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 Including Cutting, Bending, Propping with Spacers and Tying as Specified :-				
G242	Reinforcement, all diameters	Kg	200		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 1 PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>CLASS I: PIPEWORK - PIPES</u> Pipework. Supply and install				
I512	Supply and fix 20mmØ GI pipes with coupling units including gas valve. Allow for installation through concrete to dome	m	30		
	<u>SUPERSTRUCTURE</u>				
	<u>CLASS F: CONCRETE WORK</u>				
	Reinforced Concrete Class 25/20mm as Described in:				
F651	First floor slab, stair case and tank plinth	m ³	10		
F652	Columns and beams including support members to tank plinth	m ³	10		
F653	75mm thick, 500mm x 1000mm wide, 900mm high raised plinth in shower units for supported on masonry walling support at ends and center I washrooms and dressing area. Finishing with 200mm x 300mm ceramic tiles on top and front face (measured separately)	m ³	6		
	<u>CLASS G: CONCRETE ANCILLARIES</u>				
	Provide and Fix Shuttering Including Propping, Strutting and Striking, all as Specified				
	Wrot Formwork - Class F3 Finish :-				
G261	Vertical sides of columns	m ²	30		
G262	Sides and soffits of beams	m ²	110		
G263	Edges of beds, pavings, plinths and risers of steps not exceeding 300mm wide	m ²	10		
	Reinforcement				
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 Including Cutting, Bending, Propping with Spacers and Tying as Specified :-				
	Supply and fixing of all assorted reinforcement bars in roof slab, staircase, columns, beams, Bucket placing bay, tank base slab and floor slab				
G527	Reinforcement, all diameters	Kg	2,630		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 1 PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>CLASS U: MASONRY</u>				
	External Walls				
	Solid Concrete Block Walling With Concrete Blocks to BS 2028, Type "A" with Minimum Crushing Strength of 3.7N/mm² at 28 Days, Reinforced with 20 swg Hoop Iron at alternate course, and Bedded, Jointed and Pointed in Cement Mortar (1:4):-				
U821	200mm Thick walling	m ²	130		
	Labours				
U822	Extra over walling for ruled horizontal and flush vertical joints	m ²	140		
	Precast Concrete Louvre Block Walling :-				
	Internal Walls				
	Solid Concrete Block Walling With Concrete Blocks to BS 2028, Type "A" with Minimum Crushing Strength of 3.7N/mm² at 28 Days, Reinforced with 20 swg Hoop Iron at alternate course, and Bedded, Jointed and Pointed in Cement Mortar (1:4):-				
U823	200mm Thick walling	m ²	30		
U824	100mm Thick walling	m ²	90		
	<u>CLASS W: ROOF COVERINGS</u>				
	Pre-painted Gauge 24 IT5 Roofing Sheets Laid at 22.5° on: Timber Trusses. Supply and install				
W371.1	Roofing Sheets. 28 gauge pre-painted iron sheets	m ²	60		
W371.2	Polycarbonate Transparent Roofing sheets or approved equivalent	m ²	50		
	Extra Over Roofing Sheets For:-				
W371.3	Ridge and hip cappings	m	20		
	<u>CLASS O: TIMBER</u>				
	Roof Trusses, Other Members- Hip and valley rafters, struts ties purlins, king posts				
	<i>Supply and fix as per drawings</i>				
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 2.2.3: PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Sawn Cypress Grade II Maximum Moisture Content 12% Seasoned and Pressure Impregnated with Wood Preservative and Timber Joints with Bolted and Nailed Connections to the Engineer's Approval:-				
O811	150 x 50mm rafters	m	50		
O812	150 x 50mm bottom, ends and top chords	m	100		
O814	75 x 50mm internals	m	170		
O815	150 x 50mm kingpost	m	10		
O816	50 x 50mm purlins	m	70		
	ACCESSORIES				
O817.1	100 x 50mm Wall plate tied to wall with 20 s.w.g. hoop iron at 900mm centres and bedded in cement mortar (1:4) on top of wall	m	10		
	Sundries				
O817.2	Bed wall plate in cement mortar (1:4)	m	10		
	Joinery				
	General Timbers				
	<i>Supply and install</i>				
	Wrot Prime Grade Cypress, Including Finishing With Three Coats First Quality Gloss Paint :-				
O818	250 x 40mm Fascia board	m	30		
O819	Tongue & Groove (T&G) Boarding on underside of roof overhang, including provision of roof venting holes with gauze.	m ²	30		
	ACCESSORIES				
	Extras Supply and fix				
O820.1	150 x 150mm gutter fixed to fascia board and barge boards with holder bats, including painting	m	30		
O820.2	Extraover gutter for pipe outlet	nr	2		
O820.3	Ditto closed ends	nr	4		
O820.4	100mm diameter down pipes fixed to wall with clips	m	15		
O820.5	Extra over pipe for swan neck bend	nr	2		
O820.6	Ditto horse shoe bend	nr	2		
- PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET -					

Bill NO. 2.2.3: PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	CLASS N: METALWORK <i>Supply and Fix</i> Steel Doors Pressed Metal Louvre Doors Supply and Fix the following Pressed Metal Louvre Doors with 100 x 50mm Stiles and Top Rails, 150 x 50mm Middle and Bottom Rails With Pressed Metal Infill Louvres and 100 x 50mm Pressed Metal Frames, Including Hinges, Pad Bolts and Tower Bolts, All To Manufacturer's Details, with three coats gloss paint complete with Opening Accessories Including Bedding and Pointing Around Frames in Cement Mortar:-				
N190	Single door size 900 x 2400mm high (D2) Staircase	Nr	6		
N191	25 x 3mm CHS handrail welded to 300mm horizontal CHS (3No.on each side of staircase) and bolted to wall bolted to wall;spray painted.	m	30		
	CLASS Z; SIMPLE WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS DOORS AND WINDOWS Doors and Door Frames Supply and Fix 50mm Thick Prime Grade Cypress Panelled Door With 50 x 100mm Stiles and Top Rails,50 x 150mm Middle and Bottom Rails and Infill Panels in 50 x 100mm T & G battens. Rate to include for 3 Nr 100mm steel heavy duty washered butt hinges, three lever mortice lock as 'Union Ref:2237' with a set of aluminium lever handles as "Union" Ref.681-06-02 and rubber door stop and three coats of gloss paint complete with bedding and pointing around frames in cement mortar.				
Z581	<i>Door Frames -Wrot Cypress Door Frames size 100 x 50mm with a suitable rebate to receive hinged door panel, including suitable mild steel clamps fixed to back of frame and fixing to door opening size and all necessary woodwork finishes (prepare, knot, prime, stop and apply two undercoats and one finishing coat hard gloss paint to woodwork):-</i> 900mm wide x 2100mm high Door	Nr	11		
Z582	Double leaf full swing door size 1200 x 2400mm high	Nr	2		
Z583	Door size 900 x 2400 mm high with 990 x 140mm Georgian wired clear glass view panel- Entrance to hall area	Nr	1		
- PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET -					

Bill NO. 2.2.3: PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
Z584	Supply and fix Stainless steel buffer coat hooks	Nr	14		
Z585	Supply and fix 100mm D-pull handles	Nr	1		
Z586	50x25mm architrave	m	98		
Z587	15mm rounded quadrant	m	98		
	PVC windows				
	Supply and Fix the Following Standard Section PVC Casement Windows, Including 4mm Thick Clear Sheet Glass Secured with Casement Screw-less Push-in Mechanism, Complete with Locking and Opening Accessories and Water Proofing Around Opening; fixing framing to concrete, window cills- all to Engineer's Approval.				
Z514	Window size 1597 x 1197mm high in 3 equal panels, with upper part having 2 No. fixed and 1 No. top-hung ventilator, and lower half having 2No. Side-hung panels opening outwards, and 1No. Fixed panel	Nr	5		
Z515	Window size 1897 x 597mm high in 3 equal panels, with upper part having 1 No. fixed and 2 No. top-hung opening outside	Nr	5		
	Burglar proofing comprising 25 x 3mm thick vertical and horizontal mild steel members at 150mm centres, including one coat chemical resistant paint and fixing on the following windows:-				
Z523	Gauze size 1597 x 1197mm high	Nr	5		
Z524	Gauze size 1897 x 597mm high	Nr	5		
	CEILING				
	12mm Thick Approved Plasterboard in Sheets Size 2400 x 1200mm Fixed to and Including 50 x 50mm Sawn Cypress Grade 2 Battens at 600mm Centres in Both Directions Complete with Gauge Jointing Material				
Z503	Horizontal ceiling fixed to underside of trusses	m ²	60		
Z504	12mm Cornice 50mm high, plugged	m	110		
Z505	Extra over ceiling lining for forming removable access trap door size 600 x 600mm with 100 x 38 mm sawn treated cypress trimming joists between tie beams, 120 x 20mm (finished) wrought cypress frame all round and 20mm blockboard removable panel set loose on top of framing	Nr	2		
- PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET -					

Bill NO. 2.2.3: PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	CONCRETE ACCESSORIES				
	RENDERING				
	12.5mm Thick Cement and Sand Render as Described Externally on :-				
G813.1	Blockwork and concrete surfaces Screeds	m ²	120		
	Bonded cement and sand (1:4) screed bed in one coat, well bonded to concrete base as described:-				
G812.1	25mm Thick screed laid level to receive floor tiling (measured separately)	m ²	50		
G812.2	12mm (minimum) Thick Cement and sand backing (1:4) with approved plasticiser to receive granito floor laid to skirtings, treads and risers (measured separately)	m ²	30		
	Bonded cement and sand (1:4) screed bed in one coat with approved hardener incorporated in the mix, well bonded to concrete base as described:-				
G813	12mm (minimum) Thick screed laid level to receive ceramic wall tiles (measured separately)	m ²	180		
	PLASTERING				
	12.5mm Thick Gauged Cement Plaster as Described Internally on :-				
G814	Blockwork and concrete surfaces	m ²	460		
	CLASS V: PAINTING				
	Prepare and Apply Three Coats Exterior Quality Plastic Emulsion Paint:-				
	Externally on:-				
V523	Fair-faced concrete surfaces	m ²	120		
	Internally on:-				
V524	Plastered walls and surfaces	m ²	348		
	CLASS Z; SIMPLE WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS				
	Wall Tiles				
	Approved Coloured Ceramic Floor Tiles as supplied by M/s Tile & Carpet Centre, or other equal and approved			-	
				-	
Z452	200 x 300mm Thick coloured wall tiles laid on backing (measured separately) and joints filled in approved filler to match colour of tiles	m ²	170		
-					
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					
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Bill NO. 2.2.3: PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Sundries				
Z453	PVC tiling edge to external corners of tiles (Provisional)	m	75		
	FLOOR FINISHES				
	Ceramic Floor Tiling				
	Approved Coloured Ceramic Floor Tiles as supplied by M/s Tile & Carpet Centre, or other equal and approved				
Z454.1	300 x 300mm Non-slip Tiles laid on screed (measured separately) and joints filled in approved filler to match colour of tiles	m ²	100		
Z454.2	Ditto but laid as skirting 100mm high	m	200		
	PLUMBING AND DRAINAGE				
	<i>Supply and install</i>				
	Builders Work in Connection with Sanitary Fittings				
	Allow for cutting and leaving all necessary holes, notches, mortices, sinkings and chases both in the structure and its finishes and for all making good in connection with the following (All Provisional): -				
	<i>All sanitary appliances shall be supplied and installed as complete units with all fittings, fixtures, pipework to manholes, waste grits & traps and shall be as specified or approved equal. Rate to include for all 25 - 50mm dia pipework (PPR and GI pipes), Gate Valves and Taps (Pegler type, English) and connection to water supply and connection to foul water drainage System.</i>				
Z530.1	White vitreous china squatting level wash down Water Closet suit complete with high level 6 litre cistern and flush pipe.	Nr	6		
Z530.2	Ditto but Water Closet (W.C) western type complete with Cistern	Nr	2		
Z530.3	White vitreous china 1000mm x 1000mm basin washbasin complete with taps and waste water traps	Nr	4		
Z530.4	Shower unit complete with shower head and all taps and connections to water tank and connection to foul water drainage	Nr	5		
Z530.5	Mirror size 3000 x 600mm plugged and screwed to wall with chromium plated domed screws complete with 5mm thick foam back rest.	Nr	2		
Z530.6	Toilet roll holder	Nr	8		
-					
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					
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Bill NO. 2.2.3: PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
Z530.7	Recessed soap tray	Nr	5		
Z530.8	Chrome plated shower rail size 25mm diameter x 900mm long complete with fixtures	Nr	5		
Z530.9	Supply and fix 12mmØ GI water pipes with coupling units	Nr	10		
Z530.10	Urinal bowl with urinal automatic flushing system complete with cistern and flush pipes Foul/Waste drainage	Nr	3		
Z540.1	Excavate pipe trench in ordinary ground for 160mm diameter pipe between 0 - 2m and 600mm wide	m	30		
Z540.2	Provide lay and joint uPVC pipes golden brown Class 41 160mm diameter. Include for all fittings and connections to inspection chambers. Inspection Chambers	m	30		
Z540	Excavate for, provide all materials, special shuttering e.t.c and construct 600 x 450mm internal dimensions in situ concrete inspection chambers on sewers diameter 160mm. Include for building in pipes, forming benching to falls, medium duty fibre reinforced frame and cover, depth n.e. 1.5m. WATER SUPPLY AND STORAGE	Nr	5		
Z550	Allow a Provisional Sum of Kshs. 30,000 for Connection of Ablution Block to existing water supply sytem including provision of meters etc.	Item	P.S		
Z551	Allow for provision all materials and instal pipework as directed by the Engineer to provide a water selling point with requisite water meters (DN 25 mm cold water meter (Multijet, as specified in the specifications), stand pipes and taps.	Nr	1		
Z552	Provide and install an approved 1 Nr 10000 litres capacity plastic water tank complete with provisions for inlet pipe, outlet pipe, overflow pipe and drain pipe to site drainage and requisite chambers. The rate to also include for ball valve 32mm diameter medium pressure ball valve as as approved by Engineer with brass stem and plastic float, screwed to threaded socket of tank including union. Provide and install burglar proofing with mild steel frame around the tank. ELECTRICAL WORKS	Nr	1		
Z561	Allow a Provisional Sum of Kshs. 150,000 for connection to nearest KPLC power.	Item	P.S		
-					
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 2.2.3: PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
Z562	<p>Allow a Provisional Sum of Kshs. 200,000 for provision and installation of electric fittings and fixtures to the ablution block including all wiring, cabling, security lights, sockets, switches, Consumer Unit, Meters, lighting fixtures etc as directed by the Engineer.</p> <p>SITE AND ANCILLARY WORKS</p> <p>FOOTPATHS</p>	Item	P.S		
Z521	Provide, lay and compact 150mm thick approved murram base to footpaths (Provisional)	m ²	9		
Z522	Provide and apply approved weed killer to murram base for footpaths (Provisional)	m ²	9		
Z523	Precast concrete paving in 600mm x 600mm x 60mm slabs jointed and grouted up in lime and sand (1:3)	m ²	9		
	SURFACE WATER DRAINAGE & GRASSING				
	Earth Drains				
Z512	Excavate trapezoidal earth drains to the lines and levels directed by the Engineer. Allow for trimming of sides to correct slopes and cart excavated material to tips. Depth to invert n.e. 2.0m	m ³	14		
	Grassing				
Z515	Spread Top Soil stacked on site (under item 1.12) in 100mm layers as directed, level and compact (light compaction) and prepare ready for grassing. Provide and plant approved grass and maintain until it takes root. The rate to include provision of manure approximate 0.01 kg per metre squared and spreading as directed by the Engineer	m ²	24		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 2.2.3: PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	COLLECTION				
1.00	From page 1				
2.00	From page 2				
3.00	From page 3				
4.00	From page 4				
5.00	From page 5				
6.00	From page 6				
7.00	From page 7				
8.00	From page 8				
9.00	From page 9				
10.00	From page 10				
11.00	From page 11				
12.00	From page 12				
13.00	From page 13				
	TOTAL FOR 1No. Biocentre				
	No. of Biocentres		2		
	TOTAL FOR 2No. Biocenters Carried to Bill Summary				
BII TOTAL CARRIED TO SUMMARY					

Bill NO. 2.2.3: PROPOSED REHABILITATION OF EXISTING PUBLIC TOILET

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Wall & Floor Finishes				
Z550	Allow a Provisional Sum of Ksh. 100,000 for floor and wall finishes, including painting external and internal walls, installation of tiles etc.	Item	P.S		
	Plumbing & Drainage				
Z551	Allow a Provisional Sum of Kshs. 120,000 for the supply and installation of sanitary appliances including cisterns and flush pipes etc. as directed by the engineer	Item	P.S		
	Foul/Waste drainage				
Z552	Allow a Provisional Sum of Kshs. 200,000 for modification of the wash basins and sludge container of the public toilet, to allow for transfer of sludge to the biodigester of the proposed biocentre, and all other works incidental to the transfer of sludge to the adjacent biocentre as directed by the Engineer	Item	P.S		
	Water Supply/Storage				
Z553	Allow a Provisional Sum of Kshs. 30,000 for Connection of Ablution Block to existing water supply sytem including provision of meters etc.	Item	P.S		
Z554	Provide and install an approved 1 Nr 10000 litres capacity plastic water tank complete with provisions for inlet pipe, outlet pipe,overflow pipe and drain pipe to site drainage and requisite chambers. The rate to also include for ball valve 32mm diameter medium pressure ball valve as as approved by Engineer with brass stem and plastic float, screwed to threaded socket of tank including union. Provide and install burglar proofing with mild steel frame around the tank.	Nr	1		
	Electrical Works				
Z561	Allow a Provisional Sum of Kshs. 150,000 for connection to nearest KPLC power.	Item	P.S		
Z562	Allow a Provisional Sum of Kshs. 200,000 for provision and installation of electric fittings and fixtures to the ablution block including all wiring, cabling, security lights,sockets, switches, Consumer Unit, Meters, lighting fixtures etc as directed by the Engineer.	Item	P.S		
	Miscellaneous				
Z561	Allow a Provisional Sum of Kshs. 1,000,000 for Contingencies and miscellaneous expenses.	Item	P.S		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 2.2.3: PROPOSED REHABILITATION OF EXISTING PUBLIC TOILET

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
1	COLLECTION				
	From page 1				
	TOTAL FOR REHABILITATION OF 1No. Public Toilet				
BII TOTAL CARRIED TO SUMMARY					

ITEM	DESCRIPTION	AMOUNT (KShs)
	<p>BILL 2.2 COLLECTION PAGE</p> <p>TOTAL BILL 2.2.1 - COMMUNAL ABLUTION BLOCK</p> <p>TOTAL BILL 2.2.2 - BIO CENTRE REHABILITATION</p> <p>TOTAL BILL 2.2.3 - GITHOGORO BIO-CENTRES</p>	
	BILL 2.2 TOTAL CARRIED TO BILL 2 SUMMARY PAGE	

NAIROBI WATER AND SANITATION PROJECT		
Water and Sanitation Works in the Nairobi Informal Settlements		
Mji Wa Huruma Settlement		
Bill Summary		
BILL	ITEMDESCRIPTION	AMOUNT, KSHS.
Bill 2.1	WaterComponent	-
Bill 2.2	SanitationComponent	-
BILL 2.0 TOTAL CARRIED TO BILL GRAND SUMMARY PAGE		-
SIGNATURE OF BIDDER:		
NAME OF AUTHORIZED REPRESENTATIVE:		
COMPANY STAMP:		
DATE:		

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
Bill 3.1.1 - WATER PIPELINES					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	These works are to be carried out along narrow wayleaves where there may be some existing active services (electrical, water, e.t.c). This should be considered in the Contractor's rates. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of sites for structures, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works				
	CLASS A: GENERAL ITEM				
A25	Testing of works				
A25.11	Pressure testing and commissioning for the pipeline, including all necessary equipment, materials and labour for the works e.g. delivery of water for testing, fittings, disposal of used water. Pipe diameter 50 - 150 mm	m	3,985		-
A25.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified. Pipe diameter 50 - 150 mm	m	3,985		-
	CLASS D: DEMOLITION AND SITE CLEARANCE				
D1	General clearance 3m wide corridor along the pipeline. Including bushes, shrubs and small trees not exceeding 300mm girth and grubbing up roots	m	3,985.00		-
D3	Removal of Stumps (Provisional) Grub up stumps and roots and cart away to approved tips				
D3.1	Girth: 0.5 m - 1.0 m	nr	1		-
D3.2	Girth: 1.0 m - 2 m	nr	1		-
	Note:- Girth shall be measured 0.5 m above ground level				
	CLASS I: PIPE WORK - PIPES				
	HDPE PIPE SUPPLY				
	Rate to include Purchase, transportation, laying, jointing, excavation in normal material depth n.e. 2.0 m, preparation of surfaces, disposal of excavated material, shoring sides of excavation, dewatering and backfilling with suitable selected excavated material, to Specifications.				
	HDPE PN 16				
I712.2	OD 75mm	m	360		-
I712.3	OD 90mm	m	2,820		-
I712.4	OD 110mm	m	3,000		-
	HDPE PN 12.5				
I712.1	DN 50mm	m	420		-
PAGE TOTAL CARRIED TO Bill 3.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
Bill 3.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>CLASS J: PIPE WORK - FITTINGS AND VALVES (Provisional)</u>				
	<u>Provide and Install</u> (Rate to include supply of jointing materials, Stainless steel bolts, nuts, gaskets etc as applicable)				
	<u>PE 100 PN 16 Bends</u>				
	OD 110 mm				
J611.1	45°	Nr	3		-
J611.2	90°	Nr	1		-
	OD 90 mm				
J611.3	45°	Nr	1		-
J611.4	90°	Nr	1		-
	OD 75 mm				
J611.5	45°	Nr	1		-
J611.6	90°	Nr	1		-
	OD 50 mm				
J611.7	45°	Nr	1		-
J611.8	90°	Nr	3		-
	<u>GI Bends (Class B, Threaded)</u>				
	DN 100 mm				
J311.3	45°	Nr	0		-
J311.4	90°	Nr	2		-
	<u>Junctions</u>				
J633.1	OD 110mm x OD110mm x OD 90mm HDPE Tee	Nr	4		-
J633.2	OD 110mm x OD 110mm x OD 75mm HDPE Tee	Nr	1		-
J633.3	OD 90mm x OD 90mmx OD 63mm HDPE Tee	Nr	1		-
J633.4	OD 90mm x OD 90mmx OD 50 mm HDPE Tee	Nr	3		-
	<u>Valves</u>				
	Supply, handle, deliver to site, fix in place and test inclusive of all fittings as in the Standard drawings . Valves to BS 5163 and EN 1074 Standards.				
	Rate for valves shall also include for all necessary fittings (Tees, Spigot pipes etc) as per drawings				
	Line Gate Valves (Flange)				
J911.3	DN 150 mm	Nr	1		-
J911.2	DN 100 mm	Nr	2		-
PAGE TOTAL CARRIED TO Bill 3.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
Bill 3.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>Water Meters</u> MultiJet bulk cold water meters. Water meters to be as specified in Clause 404.10 of the specifications				
J911.1	DN 75mm	nr	3		-
J911.2	DN 100mm	nr	1		-
	<u>Hydrant</u> Providing & fixing single headed stand post type external yard hydrant comprising of 75mm dia gun metal female instantaneous single outlet, bend complete with all specials and accessories as required as per IS:908-1975. Rate to include Tee and associated fittings				
J911.1	DN 75 mm	nr	1		-
	<u>ANCILLARY WORKS</u> Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings. <u>Note:-</u> Items for work in this class shall include:- - Excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, masonry blocks, reinforcement, formwork, joints and finishes. - Tips for disposal of excavated material or debris to be identified by the Contractor in liaison with the Local Authority.				
	<u>In Situ Chambers</u> Provide all materials and construct Valve, Meter, AV & WO chamber internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing				
K112.1	Depth: not exceeding 2.0 m	nr	7		-
PAGE TOTAL CARRIED TO Bill 3.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
Bill 3.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Crossings				
	<u>Road Crossings</u>				
	<i>Extra-overs for normal pipe laying for road crossing works: to include breaking up and permanent reinstatement of roads and provision of a sleeve as per standard drawings</i>				
K731.1	Pipe bore: 90mm- 200 mm on gravel road	m	50		-
	<u>Other Crossings</u>				
K642	Crossing Hedge, pipe bore not exceeding 110mm	m	10.00		-
K662	Crossing Fence, pipe bore not exceeding 110mm	m	10.00		-
K672	Crossing existing sewer or drain, pipe bore not exceeding 110 mm	m	5.00		-
	<u>Marker Posts</u>				
	<i>Provide and install RC standard marker posts for:</i>				
K82.3	Sluice Valves, inscribed SV	nr	3		-
K82.4	Along Pipeline at 300 m spacing and at change of directions, , inscribed "MAJI" and Diameter of the Pipeline	nr	5		-
	<u>CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u>				
	<i>Extras over excavation and backfilling for excavation in Rock. Rate to include carting away and disposal. In pipe trench and chambers (Provisional).</i>				
L111.3	Excavation in trench for rock class "c"	m ³	120		-
	Note:- Blasting is NOT permitted for Item L11				
PAGE TOTAL CARRIED TO Bill 3.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
Bill 3.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
X51	<u>CLASS X:- MISCELLANEOUS</u> Supply and install with item decypted before, tracable warning tape, permanently imprinted with= "CAUTION WATER PIPE", color= blue, width= 50mm, thickness= 5mm.	m	3,985		-
PAGE TOTAL CARRIED TO Bill 3.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
Bill 3.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill 3.1.1 COLLECTION PAGE				
1	From page 1				-
2	From page 2				-
3	From page 3				-
4	From page 4				-
5	From page 5				-
Bill 3.1.1 TOTAL CARRIED TO Bill 3.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
BILL 3.1.2 - 50M3 6M HIGH TANK FOR MATOPENI PRIMARY (PROVISIONAL:)					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
E4	Foundation				
E411	Excavate in normal soil for tank footings size 2.0m x 2.0m x 2.0m	m3	8.00		-
F662	Supply all materials, deliver to site, mix and vibrate reinforce concrete footings and Column studs. Rate to include all formwork, reinforcement bars for concrete footing and foundation bolts for the tower	m3	3.31		-
	Class M: Steel Tower				
M0.1	Supply all materials, deliver to site 6m high steel tank complete with walkway platform and cage ladder.	kg	12,000		-
	Class N: Tank Erection				
N285.1	Supply, deliver to site and erect 6mm thick x 1m2 steel tank bottom panels on 6M high. Rate to include sealing compound, bolts, and nuts, struts, stays and cleats.	nr	16.00		-
N285.2	Supply, deliver to site and erect 6mm thick x 1m2 steel tank side panels on 6m tower. Rate to include sealing compound, bolts, and nuts, struts, stays and cleats.	nr	48.00		-
N285.3	Supply all materials and erect 2mm thick steel cover to the tank. Rate to include all the necessary fittings.	sum	1.00		-
	Class I: Plumbing Works <i>All Steel Pipes shall be epoxy coated</i>				
I411.1	Supply and joint 100 mm dia. steel pipes including all bends, adoptors and jointing materials for the inlet to the tank.	m	20.00		-
I411.2	Supply and joint 150 mm dia. steel pipes including all bends, adoptors and jointing materials for the Outlet to the tank.	m	20.00		-
I411.3	Supply and joint 75mm dia. steel pipes including all bends, adoptors and jointing materials for the overflow and washout to the tank.	m	20.00		-
I411.4	Supply and joint including all jointing materials 100 mm dia. Flanged gate valve for inlet.	nr	1.00		-
I411.5	Supply and joint including all jointing materials 150 mm dia. Flanged gate valve for Outlet.	nr	1.00		-
I411.6	Supply and joint including all jointing materials 50mm dia. Flanged gate valves for Washout	nr	1.00		-
PAGE TOTAL CARRIED TO Bill 3.1.2 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
BILL 3.1.2 - 50M3 GROUND TANK FOR MATOPENI PRIMARY (PROVISIONAL):					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	Valve Chambers Provide all materials and construct Valve chamber internal dimensions 1200mm x 1200mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing				
I411.10	inlet chamber	nr	1		-
I411.11	outlet chamber	nr	1		-
I411.12	Washout/overflow chamber	nr	1		-
	Class V: Painting				
V811	Supply and apply two coats of black bituminous paint to the inside of the tank.	m2	88.00		-
	Class V: Painting				
V111.1	Supply and apply two coats of silver aluminium paint to the outside of the tank	m2	88.00		-
V111.2	Supply and apply two coats of silver aluminium paint to the tank tower, platform, pipes and cage ladder.	sum	1.00		-
V1	Allow a PC sum for branding and paintworks on the elevated tank with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	PC		33,000.00	
V2	Allow a PC sum for supply and installation of pumps as instructed by engineer.	pc	1.00		-
	Testing				
N285.4	Tank testing and Supply and apply recommended disinfectant	sum	1.00		-
PAGE TOTAL CARRIED TO Bill 3.1.2 COLLECTION PAGE					-

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NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
BILL 3.1.3 - SOLAR SYSTEM WORKS					
ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	Unit Rate Exclusive of VAT (Kshs)	Total Amount exclusive of VAT (Kshs)
	Solar System <i>Rate to include Supply of materials, Installation, testing and commissioning of Solar Power System in accordance with Shop drawings from an approved Supplier. The drawings shall be approved by the Resident Engineer before commencement of works</i>				
X92.1	Install and commission a PV hybrid solar system to power a 22kW rated Submersible pump motor approved by Engineer. The rate to include all necessary accessories including: PV Panels (allow a safety factor of 40% for losses) Controllers DOL DC Breaker Combiner box PV Disconnect switch Inverter Electrical cables (6mm/3core) Electrical Sundries including;; cable glands, cables lags, cable ties, and any other necessary materials Lightning Protector system	LS	1	2,300,000.00	-
X92.2	Steel rack for mounting the solar panels. The structure shall be 6m high and mounted on ground. To be fabricated as per design/ shop drawings approved by the Resident Engineer	LS	1	400,000.00	-
	Fence and Gate <i>Rate to include supply of materials, delivery and installation.</i>				
X136	Fence made of Concrete posts and 12.5 Heavy gauge Chainlink complete with 12.5 Gauge x 6 strand galvanized barbed wired fencing as per Standard Drawings	m	200.00		-
X234	Metal field double leaf gate as per Standard Drawings	nr	1.00		-
PAGE TOTAL CARRIED TO Bill 3.1.3 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill 3.1.3 TOTAL TO COLLECTION PAGE PAGE 1 TOTAL				-
	TOTAL FOR 1 No. HYBRID SOLAR SYSTEM				-
	TOTAL FOR 2 No. HYBRID SOLAR SYSTEMS	nr	2.00	-	-
Bill 3.1.3 TOTAL CARRIED TO Bill 3.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT					
Bill 3.1: WATER COMPONENT					
Bill 3.1.4 - CUSTOMER CONNECTIONS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
9.3	<u>Last Mile Water connections are limited by the connections identified by the employer</u>				
9K251.1	Supply and installation of DN 12.5mm water meters, PN 10, including all (mechanical and earth!) works, fittings, tappers, valves and other supplies as per standard drawings. The item also including the water meter installation set with water meter substitution pipe but not the meter itself! The chamber suitable for the following water meter size:	Nr	150		-
CLASS I	PIPEWORK- PIPES				
I14*	Provide, lay and joint HDPE PN16 pipes, PE 100. Rate to include excavation and backfilling of trenches, depth not exceeding 1.5 m. Include for preparation of trench surfaces; upholding sides of the excavation, disposal of excess excavated material, removal of dead services				
I411	Nominal bore 13mm inclusive of valve sockets	m	6		-
CLASS J	PIPEWORK- FITTINGS AND VALVES				
	Provision and installation of fittings and valves				
	<u>Junctions and branches - Tees or Saddles</u>				
J321.1	DN 75 x 13 threaded branch	Nr	1		-
	<u>Double collars/ Couplings</u>				
J341	For GI pipe nominal bore (37mm to 90mm)	Nr	2		-
	<u>Bends/ elbows</u>				
J411	Nominal bore 13mm	Nr	5		-
	<u>Gate valves to BS 5163, PN 16, flanged to BS 4772</u>				
J811.1	Nominal bore 13mm	Nr	2		-
J811.2	Stop cork tap nominal bore 13mm	Nr	1		-
J811.3	Water meter DN 13 mm	Nr	1		-
	CLASS K : PIPEWORK- MANHOLES AND PIPEWORK ANCILLARIES				
K671	Allow for sewer/ drain crossings	Nr	1		-
K810	Allow for reinstatement of drains	m	1		-
K861	Allow for connection to mains	Nr	1		-
K861	Allow for installation of prefabricated Meter box	Nr	1		-
	CLASS L: PIPEWORK- SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION				
L11	Excavation in rock various classes (0.045m3/m)	m3	0.25		-
	Total a Typical Water Connection				-
	Total Amount for ALL Connections Proposed		50		-
	Bill 3.1.5 CARRIED TO Bill 3.1 COLLECTION PAGE				-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements</u> MATOPENI SETTLEMENT		
Bill 3.1: WATER COMPONENT		
<u>BILL 3.1.- COLLECTION PAGE</u>		
ITEM	DESCRIPTION	AMOUNT (KShs)
	Bill 3.1 COLLECTION PAGE	
	TOTAL Bill 3.1.1 - WATERLINES	-
	TOTAL Bill 3.1.2 -50M3 GROUND STEEL TANK(PROVISIONAL ITEM)	-
	TOTAL Bill 3.1.3 - HYBRID SOLAR SYSTEM	-
	TOTAL Bill 3.1.4 - CONSUMER CONNECTIONS	-
Bill 3.1 TOTAL CARRIED TO Bill 3 SUMMARY PAGE		-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MATOPENI SETTLEMENT Bill 3.2: SANITATION COMPONENT					
ITEM	DESCRIPTION	UNIT	QTY	Rate	Amount
	<p>These works are to be carried out along narrow wayleaves where there may be some existing active services (electrical, water, e.t.c). This should be considered in the Contractor's rates. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of sites for structures, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works</p> <p>CLASS A - GENERAL ITEMS</p> <p>Testing of the Works</p>				
A260.1	Carrying out test on DN300mm pipeline as specified or directed by the Engineer. Include provision of all equipment and materials	m	1680		-
	CLASS B - SITE INVESTIGATION				
B111	Trial holes where ordered to prove location, construction size etc, of pipelines, services or existing structures (Provisional)	nr	10		-
	CLASS D - DEMOLITION AND SITE CLEARANCE				
D110	General site clearance through undeveloped land over the wayleave, include for any additional clearance required	ha	0.2016		-
D210	Removal of trees and stumps girth 0.1-0.3m	nr	3		-
D220	Removal of trees and stumps girth exceeding 0.3m	nr	1		-
D461	Buildings of indeterminate construction Volume not exceeding 50m ³	nr	5		-
D561	Other structures of indeterminate construction Volume not exceeding 50m ³	nr	5		-
	CLASS I: PIPEWORK - PIPES A - SUPPLY OF PIPES				
	Supply, Transport to Site and Store Precast Concrete pipes in accordance to Technical Specifications Sockets and spigots for PCC as directed by the Engineer.				
	SOCKET AND SPIGOT PRECAST CONCRETE PIPES				
I523.1	Supply DN 300mm PCC	m	1680		-
PAGE TOTAL CARRIED TO Bill 3.2.1 COLLECTION PAGE					-

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K152	Ditto but Depth 1.5 - 2.0 m Ditto	nr nr nr nr nr	0		-
K153	but Depth 2.0 - 2.5 m Ditto but		0		-
K154	Depth 2.5 - 3.0 m Ditto but Depth		0		-
K155	3.0 - 4.0 m		0		-
K156	Ditto but Depth exceeding 4.0 m		0		-
	<i>Reinstatement of existing Manholes</i>				
K151	Provide openable reinforced concrete Manhole cover slab with clear opening of 600mm x 600mm. Provide backdrop and fittings where necessary. The works shall also include removal and disposal of solid waste and flushing of the system	nr	200		-
	Crossings, Tunnelling and Reinstatements				
	<i>Include for all work associated with the crossings</i>				
	Include for all work associated with the crossings Pipe nominal bore 300mm	nr nr nr			
K641	Hedge crossing and reinstatement; Wall crossing and reinstatement;		1		-
K651	Allow for connection to existing trunk and associated works		6		-
K681			3		-
PAGE TOTAL CARRIED TO Bill 3.2.1 COLLECTION PAGE					-

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
K731.1	Breaking up, temporary and permanent reinstatement of murrum roads as per drawing	m	100		-
K731.1	Breaking up, temporary and permanent reinstatement of cabro paved roads	m	30		-
	CLASS L: SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION				
	Extras to Excavation and Backfilling (Note: Blasting not allowed for any rock excavation)				
	<i>In Pipe Trenches</i>				
L111.1	Excavation in rock Class A	m3	168		-
L111.2	-Ditto- but rock Class B	m3	252		-
L111.3	-Ditto- but rock Class C	m3	336		-
	<i>In manholes and Other Chambers</i> (Note: Blasting not allowed for any rock excavation)				
L121.1	Excavation in rock Class A	m3	50		-
L121.2	-Ditto- but rock Class B	m3	75		-
L121.3	-Ditto- but rock Class C	m3	100		-
	Bed, Haunches and Surrounds <i>Granular Material</i> Pipeline nominal bore 300mm				
L33	Imported granular material as per specifications for sidefill a Beds 150 mm thick. Also this shall include 200mm compacted fill from the crown of the pipeline	m	100.00		-
	CLASS Y: EXISTING SEWER RENOVATION AND ANCILLARY WORKS				
	<u><i>Cleaning and repair of existing sewerage systems in the project area shall be done where directed by the Engineer</i></u>				
	<u>The rates should include all ancillary works related to cleaning and repair of existing sewerage and storm systems such as flow diversion, over pumping, maintaining house connection flows, restoration of surfaces, traffic diversion, etc</u>				
Y110	Cleaning debris and flushing of existing sewers with diameters ranging between DN 100mm and DN 600mm, manholes, inlets, outlets, catch basins, gullies and inspection chambers and survey of condition status. All debris should be disposed to an approved dumping area.	m	5000		-
Y220	Upgrade defective sewer and house connections by replacement in the area as directed by the Engineer	m	1000		-
Y634	Replacement of deteriorated existing manholes and inspection chambers according to the direction of the Engineer.	nr	30		-
Y720	Repair of deteriorated manholes and inspection chambers according to the direction of the Engineer.	nr	20		-
PAGE TOTAL CARRIED TO Bill 3.2.1 COLLECTION PAGE					-

	Bill 3.2.1 COLLECTION PAGE From Page 1 From Page 2 From Page 3 From Page 4				- - - -
Bill 3.2.1 TOTAL CARRIED TO Bill 3.2 COLLECTION PAGE					-

Bill 3.2.2 - CUSTOMER CONNECTIONS (TYPE A)					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<p>FOR PLOTS WITHIN EXISTING POUR PLUSH FACILITIES BUT NOT CONNECTED TO SEWER</p> <p>Approximate No. of Connections is 150</p> <p>The connection works are to be carried out in liason with with the respective Water Service Provider, who will receive, process and approve the applications for connections as per technical specification. The Contractor to confirm with Resident Engineer the exact number of connections and their locations before ordering materials and carrying out any works under this Bill.</p> <p>Consumer Connection Works will commence during the Construction Period and minimal works can extend to the Defects Liability Period (DLP). The connections will be carried out as soon as the sewers are commissioned. Taking Over will be on completion of the Connections. The Contractor should allow for this in their rates. There will be no extra cost of carrying out the Connection Works during DLP.</p> <p><u>CLASS A: GENERAL ITEMS</u></p> <p>A2 Specified Requirements</p> <p>A260 Allow for water testing of the sewer connection including sewer pipes and inspection chambers as specified including all requisite Materials, Personnel, Testing Equipment etc.</p> <p>A277 Allow for keeping trenches and other excavation free of water which may have entered through ground seepage, rain or by other means as directed by the Engineer.</p> <p><u>CLASS I - PIPEWORK</u></p> <p>A - Supply of Pipes The rate to include jointing materials, bolts, gaskets, rubber rings, etc.</p> <p>I511 DN 150 mm DWC sewer pipe SN 8</p>				
		m	20.0		-
		Item	LS		-
		m	20.0		-
PAGE TOTAL CARRIED TO Bill 3.2.2 COLLECTION PAGE					-

Bill 3.2.2 - CUSTOMER CONNECTIONS (TYPE A)					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	B - Pipe Laying The rate quoted shall be deemed to include excavation and backfilling with selected excavated material, of pipe trenches. The rates shall also include disposal of surplus material to approved tips, transport of material from site store to working areas, laying and jointing of pipes. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of the all Pipeline Routes, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works Depth not exceeding 2m CLASS J: PIPE FITTINGS				
I512	45° DWC Y-Junctions Supply, transport, lay, joint and test, 45° DWC Y junctions. The rate to include lean concrete plug, jointing material, rubber rings etc. DN 150 mm branch off DN 300 mm Mainline CLASS K: MANHOLES AND PIPEWORK ANCILLARIES	m	20.0		-
J423.1	Masonry Inspection Chambers Excavate for, provide all materials and construct 600 x 450mm Masonry Inspection Chamber, in accordance with drawings. Include for provision and fixing of light duty rectangular GRP frame and cover. The rate should be inclusive of two flexible joints adjacent to the Inspection Chamber as detailed. and provision of boxout and sealing for all pipes. Depth not exceeding 1.5m	Nr	1		-
K21	Crossings Allow for crossing existing boundary wall/ fence, including reinstatement to original state. Pipe nominal bore not exceeding 150mm (Provisional) Allow for crossing existing lined drains and reinstate after construction of sewer. Pipe nominal bore n.e. 150mm (Provisional)	Nr	1.0		-
K6		Nr	1.0		-
K651		Nr	1.0		-
K671	CLASS L: PIPEWORK - ANCILLARIES TO LAYING AND	Nr	1.0		-
	EXCAVATION <u>Extras to excavation and backfilling in pipe trenches</u>				
L111.1	Excavation in rock Class A	m3	1.0		-
L111.2	-Ditto- but rock Class B	m3	1.0		-
L111.3	-Ditto- but rock Class C	m3	1.0		-
	CLASS X: MISCELLANEOUS WORKS Final Connection to Inspection Chamber	Nr			
X51	Allow for provisional sum for individual connection to provided inspection chamber. Rate to include all pipes and fittings		1.0		-
PAGE TOTAL CARRIED TO Bill 3.2.2 COLLECTION PAGE					-

Bill 3.2.2 - CUSTOMER CONNECTIONS (TYPE A)					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill 3.2.2 Collection Page From Page 1 From Page 2				- -
	COST FOR ONE (1) CONSUMER CONNECTION				-
	COST FOR 50 CONNECTIONS	Nr	50	-	-
Bill 3.2.2 TOTAL CARRIED TO Bill 3 SUMMARY PAGE					-

Bio-centresConstruction WorksBill NO. 3.2.3: PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	SUBSTRUCTURES				
	CLASS B: SITE INVESTIGATION				
B111	Trial Holes where ordered to prove location, construction size etc of pipelines, services or existing structures, ground conditions. 1.2-3m (Provisional)	nr	3		
	CLASS D - DEMOLITION AND SITE CLEARANCE				
D100	Clear area within the site of all grass, bushes, shrubs, hedges, grub up roots and cart away to tips as directed by the Engineer	m ²	60		
D210	Cut down trees and removal of trees and stumps, girth 0.5- 1m (Provisional)	Nr	1		
D461	Demolition and relocation of existing structures (Provisional)	m ²	60		
	CLASS E: EARTHWORKS				
E411	Excavate over site for buildings, roads, etc. average 150mm deep to remove vegetable soil and stack part of material for use as and where directed by the Engineer, cart away surplus to tips	m ²	60		
	The rates shall include for all strutting, shuttering, stabilising the excavation faces, Disposal and keeping the excavation free of water by pumping, bailing or other means				
E211.1	Excavate below stripped level to formation level in common material, part backfill after construction and remainder, cart away to tips or use as fill on site, all as directed by the Engineer. Maximum depth n.e. 1.0 m	m ³	45		
E211.2	-Ditto- but maximum depth 1.0 m to 2.0 m	m ³	45		
E211.3	-Ditto- but maximum depth 2.0 m to 3.0 m	m ³	45		
E211.4	-Ditto- but maximum depth 3.0 m to 4.0 m		45		
E211.5	-Ditto- but maximum depth exceeding 4.0 m	m ³	25		
E211.6	Foundations and bases of isolated piers and walls 0.00 - 1.50 metres deep	m ³	60		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					

Bill NO. 3.2.3 PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Extra Over Excavation in any Position For:- (Provisional)		170		
E233	Excavation in rock Class A	m ³	2		-
E234	-Ditto- but rock Class B	m ³	4		-
E235	-Ditto- but rock Class C	m ³	4		-
	Filling				
	Includes placing and compacting as specified.				
E635	Fill and ram selected excavated materials around foundations and buildings	m ³	20		
	Approved Hardcore Filling as Described:-				
E636	300mm thick selected hardcore fill to make - up levels, well rolled smooth and compacted to receive polythene Dpm.	m ²	60		
E637	Provide, lay and level out fine crushed stone, sand or gravel blinding 50mm thick to surface of filling, including watering and rolling to achieve satisfactory compaction	m ²	60		
	CLASS W: WATERPROOFING				
	Damp-proof Membrane				
W153	Supply and lay 1000 gauge polythene sheet DPM sheet over hardcore	m ²	65		
	Anti-Termite Treatment				
X9.2	Supply and application of Termidor 25EC pesticide treatment for the control of termites to the soil beneath the foundations, executed by a Pesticides Control Products Board licenced professional pest control operator, with a ten year guarantee to surfaces of excavations	m ²	65		
	CLASS F: CONCRETE WORK				
	Mass Concrete Class 15/20mm Maximum Aggregate as Described in:-				
F511	50mm Thick blinding under foundation concrete, column bases or over hardcore	m ³	4		
	Reinforced Concrete Class 25/20mm Maximum Aggregate as Described in:-				
F621	Foundation trenches, column bases and entrance steps	m ³	10		
F622	150mm Thick foundation and ground floor bed	m ³	18		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3 PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
F623	Ground level beam and foundation beams	m ³	4		
F624	150mm Thick ramp laid to slope not exceeding 15 degrees from horizontal at entrance	m ²	4		
F625	Extra over concrete for tamping whilst still green to make ribbed finish	m ²	4		
	Reinforced Concrete Class 25/20mm Maximum aggregate as Described in:-				
F626	Isolated columns and piers in foundations CLASS G: CONCRETE ANCILLARIES Fabric Reinforcement No. A142 Mesh Size 200 x 200mm Weighing 3.95 kgs Per m ² , Including Bends, Tying Wire and Distance Blocks:-	m ³	4		
G562	Fabric reinforcement with minimum 200mm wide side and end laps, laid in bed	m ²	50		
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 including Cutting, Bending, Propping with Spacers and Tying as Specified :-				
G522	Reinforcement, all diameters	Kg	2,170		
	Formwork Provide and Fix Shuttering Including Propping, Strutting and Striking, all as Specified Sawn Formwork - Class F1 Finish:-				
G242.1	Vertical sides of column bases, columns, sides of foundations and steps in foundations Wrot Formwork - Class F3 Finish:-	m ²	140		
G242.2	Edges of beds, pavings, plinths and risers of steps not exceeding 300mm wide CLASS U: MASONRY Walling. Supply, jointing with Cement Mortar (1:3) or otherwise specified, including reinforcing with 20 swg Hoop Iron at alternate course. Foundation/ Sub structure walling-	m ²	10		
U821	Supply, joint with sand cement mortar 200mm thick Load bearing Natural Stone masonry walling as specified in the drawings. Stone dressing to be specified and approved by the Engineer. Minimum compressive strength of 10N/mm ² Solid Concrete Block Walling With Concrete Blocks to BS 2028, Type "A" with Minimum Crushing Strength of 3.7N/mm² at 28 Days, Reinforced with 20 swg Hoop Iron at alternate course, and Bedded, Jointed and Pointed in Cement Mortar (1:4):-	m ²	150		
U822	200 mm Walling	m ²	30		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3 PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Wall finishes				
G812.1	Supply and place sand cement motar mix ratio 1:3, 12mm thick for all internal wall plastering to detail.	m ²	100		
G812.2	Supply, prepare and apply three coats of bituminous paint as instructed rendered to ground floor soffit plinths and internal walls	m ²	150		
	CLASS W: WATERPROOFING				
	Damp-proof course:				
	Bituminous felt damp-proof course as described:-				
W153	Supply and install approved bituminous felt damp proof course 200mm Wide under walls. 150 mm laps ; horizontal, 1 no. layer, bedded in cement sand (1:3)mortar	m	60		
W193	Ditto 100mm Wide under walls	m	20		
	DOME				
	CLASS F: CONCRETE WORK				
	Supply and Place				
	Reinforced Concrete Class 25/20mm Maximum Aggregate as Described in:-				
F523	Curved surfaces.	m ³	22		
	Solid Concrete Block Walling With Concrete Blocks for dome to BS 2028, Type "A" with Minimum Crushing Strength of 3.7N/mm² at 28 Days, Reinforced with 20 swg Hoop Iron at alternate course, and Bedded, Jointed and Pointed in Cement Mortar (1:4):-				
	CLASS U: MASONRY				
U823	100 mm Walling	m ²	110		
	Wall finishes				
G812.1	Supply and place sand cement motar mix ratio 1:3, 12.5mm thick for all wall plastering to detail.	m ²	220		
	CLASS G: CONCRETE ANCILLARIES				
	Wrot Formwork - Class F3 Finish:-				
G211	For all concrete works	m ²	210		
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 Including Cutting, Bending, Propping with Spacers and Tying as Specified :-				
G242	Reinforcement, all diameters	Kg	200		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>CLASS I: PIPEWORK - PIPES</u> Pipework. Supply and install				
I512	Supply and fix 20mmø GI pipes with coupling units including gas valve. Allow for installation through concrete to dome	m	30		-
	<u>SUPERSTRUCTURE</u>				
	<u>CLASS F: CONCRETE WORK</u>				
	Reinforced Concrete Class 25/20mm as Described in:				
F651	First floor slab, stair case and tank plinth	m ³ m ³	10		
F652	Columns and beams including support members to tank plinth		10		
F653	75mm thick, 500mm x 1000mm wide, 900mm high raised plinth in shower units for supported on masonry walling support at ends and center I washrooms and dressing area. Finishing with 200mm x 300mm ceramic tiles on top and front face (measured separately)	m ³	6		
	<u>CLASS G: CONCRETE ANCILLARIES</u>				
	Provide and Fix Shuttering Including Propping, Strutting and Striking, all as Specified				
	Wrot Formwork - Class F3 Finish :-				
	Vertical sides of columns	m ² m ²			
G261	Sides and soffits of beams	m ²	30		
G262	Edges of beds, pavings, plinths and risers of steps not exceeding 300mm wide		110		
G263	Reinforcement		10		
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 Including Cutting, Bending, Propping with Spacers and Tying as Specified :-				
	Supply and fixing of all assorted reinforcement bars in roof slab, staircase, columns, beams, Bucket placing bay, tank base slab and floor slab	Kg			
G527	Reinforcement, all diameters		2,630		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	<u>CLASS U: MASONRY</u>				
	External Walls				
	Solid Concrete Block Walling With Concrete Blocks to BS 2028, Type "A" with Minimum Crushing Strength of 3.7N/mm² at 28 Days, Reinforced with 20 swg Hoop Iron at alternate course, and Bedded, Jointed and Pointed in Cement Mortar (1:4):-				
U821	200mm Thick walling	m ²	130		
	Labours				
U822	Extra over walling for ruled horizontal and flush vertical joints	m ²	140		
	Precast Concrete Louvre Block Walling :-				
	Internal Walls				
	Solid Concrete Block Walling With Concrete Blocks to BS 2028, Type "A" with Minimum Crushing Strength of 3.7N/mm² at 28 Days, Reinforced with 20 swg Hoop Iron at alternate course, and Bedded, Jointed and Pointed in Cement Mortar (1:4):-				
U823	200mm Thick walling	m ²	30		
U824	100mm Thick walling	m ²	90		
	<u>CLASS W: ROOF COVERINGS</u>				
	Pre-painted Gauge 24 IT5 Roofing Sheets Laid at 22.5° on: Timber Trusses. Supply and install				
W371.1	Roofing Sheets. 28 gauge pre-painted iron sheets	m ²	60		
W371.2	Polycarbonate Transparent Roofing sheets or approved equivalent	m ²	50		
	Extra Over Roofing Sheets For:-				
W371.3	Ridge and hip cappings	m	20		
	<u>CLASS O: TIMBER</u>				
	Roof Trusses, Other Members- Hip and valley rafters, struts ties purlins, king posts <i>Supply and fix as per drawings</i>				
	Double Pitch Roof Truss With 600mm Eaves Projection, in 150 x 50mm Rafters, Ceiling Joists, Struts and Ties in Sawn Cypress Grade II Seasoned and Pressure Impregnated with Wood Preservative and Timber Joints With Bolted and Nailed Connections to the Engineer's Approval :-				
4.40	Equal truss 3250mm clear span and 800mm high	Nr	0		
4.50	Equal truss 4500mm clear span and 1100mm high	Nr	0		
	Other Roof Members				

PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET						-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Sawn Cypress Grade II Maximum Moisture Content 12% Seasoned and Pressure Impregnated with Wood Preservative and Timber Joints with Bolted and Nailed Connections to the Engineer's Approval:-				
O811	150 x 50mm rafters	m	50		
O812	150 x 50mm bottom, ends and top chords	m	100		
O814	75 x 50mm internals	m	170		
O815	150 x 50mm kingpost	m	10		
O816	50 x 50mm purlins	m	70		
	ACCESSORIES				
O817.1	100 x 50mm Wall plate tied to wall with 20 s.w.g. hoop iron at 900mm centres and bedded in cement mortar (1:4) on top of wall	m	10		
	Sundries				
O817.2	Bed wall plate in cement mortar (1:4)	m	10		
	Joinery				
	General Timbers				
	<i>Supply and install</i>				
	Wrot Prime Grade Cypress, Including Finishing With Three Coats First Quality Gloss Paint :-				
O818	250 x 40mm Fascia board	m	30		
O819	Tongue & Groove (T&G) Boarding on underside of roof overhang, including provision of roof venting holes with gauze.	m ²	30		
	ACCESSORIES				
	Extras Supply and fix				
O820.1	150 x 150mm gutter fixed to fascia board and barge boards with holder bats, including painting	m	30		
O820.2	Extra over gutter for pipe outlet	nr	2		
O820.3	Ditto closed ends	nr	4		
O820.4	100mm diameter down pipes fixed to wall with clips	m	15		
O820.5	Extra over pipe for swan neck bend	nr	2		
O820.6	Ditto horse shoe bend	nr	2		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	CLASS N: METALWORK <i>Supply and Fix</i> Steel Doors Pressed Metal Louvre Doors Supply and Fix the following Pressed Metal Louvre Doors with 100 x 50mm Stiles and Top Rails, 150 x 50mm Middle and Bottom Rails With Pressed Metal Infill Louvres and 100 x 50mm Pressed Metal Frames, Including Hinges, Pad Bolts and Tower Bolts, All To Manufacturer's Details, with three coats gloss paint complete with Opening Accessories Including Bedding and Pointing Around Frames in Cement Mortar:-				
N190	Single door size 900 x 2400mm high (D2)	Nr	6		
	Staircase 25 x 3mm CHS handrail welded to 300mm horizontal CHS (3No. on each side of staircase) and bolted to wall bolted to wall; spray painted.	m	30		
	CLASS Z; SIMPLE WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS DOORS AND WINDOWS Doors and Door Frames Supply and Fix 50mm Thick Prime Grade Cypress Panelled Door With 50 x 100mm Stiles and Top Rails, 50 x 150mm Middle and Bottom Rails and Infill Panels in 50 x 100mm T & G battens. Rate to include for 3 Nr 100mm steel heavy duty washered butt hinges, three lever mortice lock as 'Union Ref:2237' with a set of aluminium lever handles as "Union" Ref.681-06-02 and rubber door stop and three coats of gloss paint complete with bedding and pointing around frames in cement mortar. <i>Door Frames -Wrot Cypress Door Frames size 100 x 50mm with a suitable rebate to receive hinged door panel, including suitable mild steel clamps fixed to back of frame and fixing to door opening size and all necessary woodwork finishes (prepare, knot, prime, stop and apply two undercoats and one finishing coat hard gloss paint to woodwork):-</i>				
Z581	900mm wide x 2100mm high Door	Nr	11		
Z582	Double leaf full swing door size 1200 x 2400mm high	Nr	2		
Z583	Door size 900 x 2400 mm high with 990 x 140mm Georgian wired clear glass view panel- Entrance to hall area	Nr	1		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
Z584	Supply and fix Stainless steel buffer coat hooks	Nr	14		
Z585	Supply and fix 100mm D-pull handles	Nr	1		
Z586	50x25mm architrave	m	98		
Z587	15mm rounded quadrant	m	98		
	PVC windows				
	Supply and Fix the Following Standard Section PVC Casement Windows, Including 4mm Thick Clear Sheet Glass Secured with Casement Screw-less Push-in Mechanism, Complete with Locking and Opening Accessories and Water Proofing Around Opening; fixing framing to concrete, window cills- all to Engineer's Approval.				
Z514	Window size 1597 x 1197mm high in 3 equal panels, with upper part having 2 No. fixed and 1 No. top-hung ventilator, and lower half having 2No. Side-hung panels opening outwards, and 1No. Fixed panel	Nr	5		
Z515	Window size 1897 x 597mm high in 3 equal panels, with upper part having 1 No. fixed and 2 No. top-hung opening outside	Nr	5		
	Burglar proofing comprising 25 x 3mm thick vertical and horizontal mild steel members at 150mm centres, including one coat chemical resistant paint and fixing on the following windows:-				
Z523	Gauze size 1597 x 1197mm high	Nr	5		
Z524	Gauze size 1897 x 597mm high	Nr	5		
	CEILING				
	12mm Thick Approved Plasterboard in Sheets Size 2400 x 1200mm Fixed to and Including 50 x 50mm Sawn Cypress Grade 2 Battens at 600mm Centres in Both Directions Complete with Gauge Jointing Material				
Z503	Horizontal ceiling fixed to underside of trusses	m ²	60		
Z504	12mm Cornice 50mm high, plugged	m	110		
Z505	Extra over ceiling lining for forming removable access trap door size 600 x 600mm with 100 x 38 mm sawn treated cypress trimming joists between tie beams, 120 x 20mm (finished) wrot cypress frame all round and 20mm blockboard removable panel set loose on top of framing	Nr	2		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	CONCRETE ACCESSORIES				
	RENDERING				
	12.5mm Thick Cement and Sand Render as Described Externally on :-				
G813.1	Blockwork and concrete surfaces	m ²	120		
	Screeds				
	Bonded cement and sand (1:4) screed bed in one coat, well bonded to concrete base as described:-				
G812.1	25mm Thick screed laid level to receive floor tiling (measured separately)	m ²	50		
G812.2	12mm (minimum) Thick Cement and sand backing (1:4) with approved plasticiser to receive granito floor laid to skirtings, treads and risers (measured separately)	m ²	30		
	Bonded cement and sand (1:4) screed bed in one coat with approved hardener incorporated in the mix, well bonded to concrete base as described:-				
G813	12mm (minimum) Thick screed laid level to receive ceramic wall tiles (measured separately)	m ²	180		
	PLASTERING				
	12.5mm Thick Gauged Cement Plaster as Described Internally on :-				
G814	Blockwork and concrete surfaces	m ²	460		
	CLASS V: PAINTING				
	Prepare and Apply Three Coats Exterior Quality Plastic Emulsion Paint:-				
	Externally on:-				
V523	Fair-faced concrete surfaces	m ²	120		
	Internally on:-				
V524	Plastered walls and surfaces	m ²	348		
	CLASS Z; SIMPLE WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS				
	Wall Tiles				
	Approved Coloured Ceramic Floor Tiles as supplied by M/s Tile & Carpet Centre, or other equal and approved				
Z452	200 x 300mm Thick coloured wall tiles laid on backing (measured separately) and joints filled in approved filler to match colour of tiles	m ²	170		
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Sundries				
Z453	PVC tiling edge to external corners of tiles (Provisional)	m	75		
	FLOOR FINISHES				
	Ceramic Floor Tiling				
	Approved Coloured Ceramic Floor Tiles as supplied by M/s Tile & Carpet Centre, or other equal and approved				
Z454.1	300 x 300mm Non-slip Tiles laid on screed (measured separately) and joints filled in approved filler to match colour of tiles	m ²	100		
Z454.2	Ditto but laid as skirting 100mm high	m	200		
	PLUMBING AND DRAINAGE				
	<i>Supply and install</i>				
	Builders Work in Connection with Sanitary Fittings				
	Allow for cutting and leaving all necessary holes, notches, mortices, sinkings and chases both in the structure and its finishes and for all making good in connection with the following (All Provisional): -				
	<i>All sanitary appliances shall be supplied and installed as complete units with all fittings, fixtures, pipework to manholes, waste grits & traps and shall be as specified or approved equal. Rate to include for all 25 - 50mm dia pipework (PPR and GI pipes), Gate Valves and Taps (Pegler type, English) and connection to water supply and connection to foul water drainage System.</i>				
Z530.1	White vitreous china squatting level wash down Water Closet suit complete with high level 6 litre cistern and flush pipe.	Nr	6		-
Z530.2	Ditto but Water Closet (W.C) western type complete with Cistern	Nr	2		-
Z530.3	White vitreous china 1000mm x 1000mm basin washbasin complete with taps and waste water traps	Nr	4		-
Z530.4	Shower unit complete with shower head and all taps and connections to water tank and connection to foul water drainage	Nr	5		-
Z530.5	Mirror size 3000 x 600mm plugged and screwed to wall with chromium plated domed screws complete with 5mm thick foam back rest.	Nr	2		-
Z530.6	Toilet roll holder	Nr	8		-
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
Z530.7	Recessed soap tray	Nr	5		-
Z530.8	Chrome plated shower rail size 25mm diameter x 900mm long complete with fixtures	Nr	5		-
Z530.9	Supply and fix 12mmø GI water pipes with coupling units	Nr	10		-
Z530.10	Urinal bowl with urinal automatic flushing system complete with cistern and flush pipes	Nr	3		
11.91	Wall mounted washbasin as "Twyfords Entice 575" with one tap & 32mm waste grit *basin mixer as "Europath Astra" with aerator & pop-up waste.*32mm CP bottle trap with tail pipe, cap-nut & wall flange as "Cobra" 340 & C-342/1/2/3	Nr			
	Foul/Wastedrainage				
Z540.1	Excavate pipe trench in ordinary ground for 160mm diameter pipe between 0 - 2m and 600mm wide	m	30		
Z540.2	Provide lay and joint uPVC pipes golden brown Class 41 160mm diameter. Include for all fittings and connections to inspection chambers.	m	30		
	Inspection Chambers				
Z540	Excavate for, provide all materials, special shuttering e.t.c and construct 600 x 450mm internal dimensions in situ concrete inspection chambers on sewers diameter 160mm. Include for building in pipes, forming benching to falls, medium duty fibre reinforced frame and cover, depth n.e. 1.5m.	Nr	5		
	WATER SUPPLY AND STORAGE				
Z550	Allow a Provisional Sum of Kshs. 30,000 for Connection of Ablution Block to existing water supply sytem including provision of meters etc.	Item	P.S		
Z551	Allow for provision all materials and instal pipework as directed by the Engineer to provide a water selling point with requisite water meters (DN 25 mm cold water meter (Multijet, as specified in the specifications), stand pipes and taps.	Nr	1		
Z552	Provide and install an approved 1 Nr 10000 litres capacity plastic water tank complete with provisions for inlet pipe, outlet pipe, overflow pipe and drain pipe to site drainage and requisite chambers. The rate to also include for ball valve 32mm diameter medium pressure ball valve as as approved by Engineer with brass stem and plastic float, screwed to threaded socket of tank including union. Provide and install burglar proofing with mild steel frame around the tank.	Nr	1		
	ELECTRICAL WORKS				
Z561	Allow a Provisional Sum of Kshs. 150,000 for connection to nearest KPLC power.	Item	P.S	#####	
PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
Z562	Allow a Provisional Sum of Kshs. 200,000 for provision and installation of electric fittings and fixtures to the ablution block including all wiring, cabling, security lights, sockets, switches, Consumer Unit, Meters, lighting fixtures etc as directed by the Engineer.	Item	P.S		
	SITE AND ANCILLARY WORKS				
	FOOTPATHS				
Z521	Provide, lay and compact 150mm thick approved murram base to footpaths (Provisional)	m ²	9		
Z522	Provide and apply approved weed killer to murram base for footpaths (Provisional)	m ²	9		
Z523	Precast concrete paving in 600mm x 600mm x 60mm slabs jointed and grouted up in lime and sand (1:3)	m ²	9		
	FENCING AND GATES				
14.50	Excavate for post holes, provide all materials and construct Barbed Wire Fence on wattle posts posts at 3m centre to centre including straining posts at every 10th post and additional posts at corners	m	60		
14.60	Provide all materials and construct metal gate 2.0m wide including 2 Nr. Pillars, footings, etc.	Nr	1		
	SURFACE WATER DRAINAGE & GRASSING				
	Earth Drains				
Z512	Excavate trapezoidal earth drains to the lines and levels directed by the Engineer. Allow for trimming of sides to correct slopes and cart excavated material to tips. Depth to invert n.e. 2.0m	m ³	14		
	Culvert Pipes				
14.11	Excavate trench depth n.e. 2.5 m, supply, lay and joint for 900mm diameter precast concrete ogee pipes including 200mm Class 20/20 concrete surround, backfill after laying of pipes, compact and cart away surplus material to tips	m	7		
	Headwalls				
14.12	Excavate for, provide all materials and construct 225 mm thick masonry headwalls including concrete Class 15/20 footings, all in accordance with standard drawings	Nr	2		
	Grassing				
Z515	Spread Top Soil stacked on site (under item 1.12) in 100mm layers as directed, level and compact (light compaction) and prepare ready for grassing. Provide and plant approved grass and maintain until it takes root. The rate to include provision of manure approximate 0.01 kg per metre squared and spreading as directed by the Engineer	m ²	24		

PAGE TOTAL CARRIED TO SECTION COLLECTION SHEET					-

Bill NO. 3.2.3. PROPOSED BIO-CENTRE DEVELOPMENT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	COLLECTION				
1.00	From page 1				-
2.00	From page 2				-
3.00	From page 3				-
4.00	From page 4				-
5.00	From page 5				-
6.00	From page 6				-
7.00	From page 7				-
8.00	From page 8				-
9.00	From page 9				-
10.00	From page 10				-
11.00	From page 11				-
12.00	From page 12				-
13.00	From page 13				-
	TOTAL FOR 1No. Biocentre				-
	No. of Biocentres		1		
	TOTAL FOR 1No. Biocenters Carried to Bill Summary				-
BII TOTAL CARRIED TO GRAND SUMMARY					-

<u>BILL 3.2.3.- COLLECTION PAGE</u>		
ITEM	DESCRIPTION	AMOUNT (KShs)
	Bill 3.3.3 COLLECTION PAGE	
	TOTAL Bill 3.2.1 - SEWERS	-
	TOTAL Bill 3.2.2 - CUSTOMER CONNECTIONS (TYPE A)	-
	TOTAL Bill 3.2.3 - BIO CENTRE	-
Bill 3.2 TOTAL CARRIED TO Bill 3 SUMMARY PAGE		-

NAIROBI WATER AND SANITATION PROJECT		
Water and Sanitation Works in the Nairobi Informal Settlements		
Matopeni Settlement		
Bill Summary		
BILL	ITEM DESCRIPTION	AMOUNT, KSHS.
Bill 3.1	Water Component	-
Bill 3.2	Sanitation Component	-
BILL 3.0 TOTAL CARRIED TO BILL GRAND SUMMARY PAGE		-
SIGNATURE OF BIDDER: NAME OF AUTHORIZED REPRESENTATIVE: COMPANY STAMP: DATE:		

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.1: WATER COMPONENT Bill 4.1.1 - WATER PIPELINES					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<p>These works are to be carried out along narrow wayleaves where there may be some existing active services (electrical, water, e.t.c). This should be considered in the Contractor's rates. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of sites for structures, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works</p> <p>CLASS A: GENERAL ITEM</p> <p>A25 <u>Testing of works</u></p> <p>Pressure testing and commissioning for the pipeline, including all necessary equipment, materials and labour for the works e.g. delivery of water for testing, fittings, disposal of used water. Pipe diameter 50 - 150 mm</p> <p>A25.2</p> <p>Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified. Pipe diameter 50 - 150 mm</p> <p>CLASS D: DEMOLITION AND SITE CLEARANCE</p> <p>D1</p> <p>General clearance 1.5m wide corridor along the pipeline. Including bushes, shrubs and small trees not exceeding 300mm girth and grubbing up roots</p> <p>D3 Removal of Stumps (Provisional)</p> <p>Grub up stumps and roots and cart away to approved tips</p>				
D3.1	Girth: 0.5 m - 1.0 m	nr	4		-
D3.2	Girth: 1.0 m - 2 m	nr	3		-
	Note:- Girth shall be measured 0.5 m above ground level				
	<p>CLASS I: PIPE WORK - PIPES</p> <p><u>Provide and Lay</u></p> <p>Rate to include Purchase, transportation, laying, jointing, excavation in normal material depth n.e. 2.0 m, preparation of surfaces, disposal of excavated material, shoring sides of excavation, dewatering and backfilling with suitable selected excavated material, to Specifications. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of the all Pipeline Routes, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works</p> <p>HDPE PN 16</p> <p>OD 63mm</p>				
I712.1		m	1,330		-
PAGE TOTAL CARRIED TO Bill 4.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.1: WATER COMPONENT					
Bill 4.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>CLASS J: PIPE WORK - FITTINGS AND VALVES (Provisional)</u> <u>Provide and Install (Rate to include supply of jointing materials, Stainless steel bolts, nuts, gaskets etc as applicable)</u> <u>HDPE PN16 Bends</u> <u>OD 63 mm</u> J611.7 45° J611.8 90°	Nr Nr	5 5		- -
	<u>ANCILLARY WORKS</u> Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings. <u>Note:-</u> Items for work in this class shall include:- - Excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, masonry blocks, reinforcement, formwork, joints and finishes. - Tips for disposal of excavated material or debris to be identified by the Contractor in liaison with the Local Authority. <u>In Situ Chambers</u> Provide all materials and construct Valve chamber internal dimensions 4000mm x 2000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing K112.1 Depth: not exceeding 2.0 m	nr	4		-
PAGE TOTAL CARRIED TO Bill 4.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.1: WATER COMPONENT					
Bill 4.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>Marker Posts</u> <i>Provide and install RC standard marker posts for:</i>				-
K82.3	Sluice Valves, inscribed SV	nr nr	4		-
K82.4	Along Pipeline at 300 m spacing and at change of directions, , inscribed "MAJI" and Diameter of the Pipeline		3		-
	<u>CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u>				
	<i>Extras over excavation and backfilling for excavation in Rock. Rate to include carting away and disposal. In pipe trench and chambers (Provisional).</i>				
L111.1	Excavation in trench for rock class "A"	m ³	140		-
L111.2	Excavation in trench for rock class "B"	m ³	84		-
L111.3	Excavation in trench for rock class "C"	m ³	56		-
	<u>Note:-</u> Blasting is NOT permitted for Item L11				
PAGE TOTAL CARRIED TO Bill 4.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.1: WATER COMPONENT					
Bill 4.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
L531	Imported Granular Fill (Provisional) <i>Provide, transport to site and place imported granular material and compact in bed (100 mm thick) and surround to pipes (200 mm thick) as per standard drawings</i> Surround To pipes nominal bore: n.e. 150 mm	m	1,330		-
X51	CLASS X:- MISCELLANEOUS Supply and install with item decypted before, tracable warning tape, permanently imprinted with= "CAUTION WATER PIPE", color= blue, width= 50mm, thickness= 5mm.	m	1,330		-
PAGE TOTAL CARRIED TO Bill 4.1.1 COLLECTION PAGE					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements</u> MARIGUINI SETTLEMENT					
Bill 4.1: WATER COMPONENT					
Bill 4.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL SUMMARY PAGE				
1	From page 1				-
2	From page 2				-
3	From page 3				-
4	From page 4				-
Bill 4.1.1 TOTAL CARRIED TO Bill 4.1 SUMMARY PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.1: WATER COMPONENT					
Bill 4.1.2 - CUSTOMER CONNECTIONS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill 4.1.2- WATER CONSUMER CONNECTIONS				
9.3	Last Mile Water connections are limited by the connections identified by the employer. The Contractor to confirm with Resident Engineer the exact number of connections and their locations before ordering materials and carrying out any works under this Bill.				
	Typical 1 connection				
CLASS I	PIPEWORK- PIPES				
I14*	Provide, lay and joint HDPE PN16 pipes Rate to include excavation and backfilling of trenches, depth not exceeding 1.5 m. Include for preparation of trench surfaces; upholding sides of the excavation, disposal of excess excavated material, removal of dead services	m	30		-
I411	Nominal bore 13mm inclusive of valve sockets				-
CLASS J	PIPEWORK- FITTINGS AND VALVES				
	Provision and installation of fittings and valves				-
	13mm nominal bore G1 fittings as follows	Nr Nr			-
Z512.1	Unions	Nr Nr	2		-
Z512.2	Elbows	Nr Nr	2		-
Z512.3	Bends	Nr Nr	2		-
Z512.4	Nipples	Nr Nr	8		-
Z512.5	Long thread nipples		8		-
Z512.6	Equal tees		1		-
Z512.7	Back nuts		8		-
Z512.8	Pegler (or equivalent) gate valves Stop	Nr Nr	1		-
J811.2	cork tap nominal bore 13mm Water		1		-
J811.3	meter DN 13 mm	m m m	1		-
	Bends/ elbows				
J411	Nominal bore 15mm	Nr	5		-
	Gate valves to BS 5163, PN 16, flanged to BS 4772				-
J811.1	Nominal bore 15mm	Nr	2		-
J811.2	Stop cork tap nominal bore 15mm	Nr	1		-
J811.3	Water meter DN 15 mm	Nr	1		-
	CLASS K : PIPEWORK- MANHOLES AND PIPEWORK ANCILLARIES	m3			-
K671	Allow for sewer/ drain crossings		1		-
K678	Allow for underground telephone and power services crossings		3		-
K731	Allow for breaking, and temporary and permanent reinstatement of murrum roads		3		-
K741	Allow for breaking up, temporary and permanent reinstatement of murrum foot paths		1		-
K810	Allow for reinstatement of drains				-
	CLASS L: PIPEWORK- SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION				
L11	Excavation in rock various classes (0.045m ³ /m)		1.00		-
	Total a Typical Water Connection		250		
	Total Amount for ALL Connections Proposed				
BILL5.1.2 TOTAL CARRIED TO BILL 10.1 SUMMARY PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.1: WATER COMPONENT					
BILL 5.1.3- WATER POINTS (PPDS)					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
X92.1	Installation of PPDS Excavate for, provide all materials and construct prepaid water dispenser chamber in accordance with the tender drawings & specifications	nr	3		-
X92.3	Supply, install, test and commission prepaid meter dispenser and with 2 draw-off taps. Rate to include for provision of wiring and pipework comprising of 2 valves, meter and tees all of 1/2" diameter, in accordance with the Tender drawings & Specifications	nr	3		-
X92.3	Provision and installation of 5 m³ plastic tank (Approved by engineer) and pipework interconnection to the Water	nr	3		-
X92.5	Fabrication and erection of steel tower to support the stor A masonry base can be used as an alternative to Steel tower when determined appropriate by the Resident Engineer - A circular masonry base 2.2 m diameters and 0.5 m high (at the Stand Pipe/ Water ATM) for the storage tank, The inside of the base to be filled with well compacted hardcore and covered with a mass concrete slab 100 mm thick. Contract rates to be applied. A masonry base can be used as an alternative to Steel tower when determined appropriate by the Resident Engineer - A circular masonry base 2.2 m diameters and 0.5 m high (at the Stand Pipe/ Water ATM) for the storage tank, The inside of the base to be filled with well compacted hardcore and covered with a mass concrete slab 100 mm thick. Contract rates to be applied.	nr	3		-
V3	Allow a PC sum for branding and paintworks on the PPDs with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	PC			
Bill 4.1.3 TOTAL CARRIED TO Bill 4.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.1: WATER COMPONENT					
BILL 5.1.4- REHABILITATION WORKS					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	EXTERNAL WALL FINISHES				
	Remove existing plaster and apply 15mm thick render as described to :				
W168.1	Sides of concrete or stone block surfaces and under top slab	M ²	34		-
W168.2	Doors and Windows reveals not exceeding 100mm girth	M ²	2		-
G812	15mm thick external rendering to plinth surfaces finished smooth with a wood float	M ²	11		-
	Plastered Internal surfaces of walls 2-coats of emulsion undercoat paint and 3-coats of first grade oil paint to				
V756.1	Externally rendered surfaces	M ²	31		-
V756.2	Ditto but not exceeding 100mm girth	M	11		-
	INTERNAL WALL FINISH				
	15mm thick gauged lime plaster (1:2:9) as described to:				
G812.1	Sides of walls or concrete surfaces and under top slab	M ²	38		-
G812.2	Door and window reveals not exceeding 100mm girth	M ²	2		-
	PAINTING AND DECORATING				
	Prepare and apply three coats plastic emulsion paint to:				
V531.1	Plastered walls				
V531.2	Door and window reveals not exceeding 100mm girth.	M ²	87		-
	Allow a PC sum for branding and paintworks on the water kiosk with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	M	2		-
		PC			
	WINDOWS AND DOORS				
	<i>Supply and Fix the following purpose made steel windows and door as per detail manufactured from heavy duty standard sections primed with one coat of red oxide primer and fixing to masonry or concrete head and jambs complete with closing mechanism and other fittings.</i>				
Z311	Window size 1200 x 900 mm high overall	Nr	1		-
Bill 4.1.4 TOTAL CARRIED TO Bill 4.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.1: WATER COMPONENT					
BILL 5.1.4- REHABILITATION WORKS					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	DOORS				
	Supply and Fix the following purpose made steel windows and door as per detail manufactured from heavy duty standard sections primed with one coat of red oxide primer and fixing to masonry or concrete head and jambs complete with closing mechanism and other fittings.				
Z313.2	Door size 900x 2100mm high	Nr	1		-
	Ironmongery				
	Supply and fix the following ironmongery complete with matching screws all as per "union" catalogue or other aqual and approved				
Z343.1	3-lever mortice door lock	NO NO	1		-
Z343.2	2-lever mortice door lock	NO NO	3		-
Z341	100mm heavy duty steel butt hinges		3		-
Z342	Approved rubber door stop		1		-
	CLASS V: PAINTING AND DECORATING				
	Prepare and apply three coats gloss oil paint to steel surfaces internally	M ²			
V326.3	general surfaces of doors and windows		3		-
	Water Supply System:	m			
Z511	25mm diameter G1 class 'B' pipe to BS 1387, thread joints to BS 21 for interconnection from mains to tank and to the service/ draw off points. Install new 3 No draw off taps	Nr	15		-
Z512.11	DN 25 mm cold water meter (Multijet, Brass body)		1.00		
	Total rehabilitaton for 1 No water kiosk				-
	Total rehabilitaton for 3 No water kiosk		3		-
Bill 4.1.3 TOTAL CARRIED TO Bill 4.1 COLLECTION PAGE					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT</u>					
Bill 4.1: WATER COMPONENT					
<u>BILL 4.1.- COLLECTION PAGE</u>					
ITEM	DESCRIPTION				AMOUNT (KShs)
	Bill 4.1.1 - WATERLINES				-
	Bill 4.1.2 - CUSTOMER CONNECTIONS				-
	Bill 4.1.3- WATER POINTS (PPDs)				-
	Bill 4.1.4- REHABILITATION OF 3 No WATER KIOSKS				-
Bill 4.1 TOTAL CARRIED TO Bill 4 SUMMARY PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT BILL No 5.2.1: SEWERLINES					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<p>These works are to be carried out along narrow wayleaves where there may be some existing active services (electrical, water, e.t.c). This should be considered in the Contractor's rates. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of sites for structures, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works. Specific conditions in execution of these Works are deemed to be included in the Contractor's rates. These include but are not limited to the following:</p> <p>i. No blasting will be permitted in these areas</p> <p>ii. The Contractor to avoid prolonged interruption of utility services</p> <p>iii. Pedestrian and vehicular Access to individual shops / plots to be maintained at all times</p> <p>iv. Safety hoarding, lighting, bands, warning signs, etc. to be maintained at all times.</p> <p>v. Condition of wayleave.</p> <p><u>CLASS A: GENERAL ITEMS</u></p> <p>A2 Specified Requirements</p> <p>A260.1 Carrying out test on DN 450 mm pipeline as specified or directed by the Engineer. Include provision of all equipment and materials</p> <p>A277 Allow for dewatering to keep trenches and other excavation free of water.</p> <p><u>CLASS B: SITE INVESTIGATION</u></p> <p>B112 Trial holes where ordered to prove location, construction size etc of pipelines, services or existing structures. Depth n.e 3m (Provisional)</p> <p><u>CLASS D: DEMOLITION AND SITE CLEARANCE</u> <u>Rate to include cart away to approved tips</u></p> <p>D1 Site Clearance</p> <p>D110 General clearance along the sewerline 3 m wide</p>				
PAGE TOTAL CARRIED TO Bill 4.2.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT BILL No 5.2.1: SEWERLINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
D3	Removal of Stumps (Provisional)				
	Grub up stumps and roots and cart away to tips				
D310	Girth: n.e. 1.0 m	nr	9		-
D320	Girth: over 1 m	nr	9		-
	Note: Girth shall be measured 0.5 m above ground level				
D561	Buildings of indeterminate construction volume not exceeding 50-100m ³	nr	1		-
D562	Buildings of indeterminate construction volume not exceeding 50m ³	nr	1		-
D563	Other structures of indeterminate construction Volume not exceeding 50m ³	nr	1		-
D564	Other structures of indeterminate construction Volume not exceeding 50-100m ³	nr	1		-
					-
	<u>CLASS I : PIPEWORK - PIPES</u>				
	A - SUPPLY OF PIPES				
	Supply, Transport to Site and Store Precast Concrete pipes in accordance to Technical Specifications Sockets and spigots for PCC as directed by the Engineer.				
I5	SOCKET AND SPIGOT PRECAST CONCRETE PIPES				
I523.1	DN 450mm PCC	m	1,800		-
I4	Steel pipes, epoxy-coated				
I422.1	Supply and install Steel pipes, epoxy-coated externally, cement lined on interior surface, DN 300 mm for road and aerial crossings complete with fittings	m	58		-
	B - PIPE LAYING				
	The rate quoted shall be deemed to include excavation and backfilling with selected excavated material, of pipe trenches. The rates shall also include disposal of surplus material to approved tips, transport of material from site store to working areas, laying and jointing of pipes. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of the all Pipeline Routes, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works				
PAGE TOTAL CARRIED TO Bill 4.2.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT BILL No 5.2.1: SEWERLINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
I532	Nominal bore: 450 mm in trenches Depth not exceeding 1.5m	m	339		-
I533	Depth 1.5m - 2.0m	m	968		-
I534	Depth 2.0 m - 2.5m	m	454		-
I535	Depth 2.5 m - 3.0m	m	39		-
<u>CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES</u>					
K13	In Situ Concrete Manholes other than rock, construction of the manhole, reinforced concrete cover slab, installation of heavy duty (40 tonnes)				
K151	Reinforced Manhole internal diameter 1200mm , depth n.e. 1.5m	Nr	13		-
K 152	Ditto but Depth 1.5 - 2.0 m	nr	30		-
K 153	Ditto but Depth 2.0 - 2.5 m	nr	15		-
K 154	Ditto but Depth 2.5 - 3.0 m	nr	2		-
K6	Crossings				
K652	Allow for crossing existing masonry boundary walls, including reinstatement to original state. Nominal bore not exceeding 450mm	Nr	6		-
PAGE TOTAL CARRIED TO Bill 4.2.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
BILL No 5.2.1: SEWERLINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
K671	Allow for crossing existing lined drains and sewers, and reinstate these after construction of sewer has been completed. Pipe inside diameter n.e. 400mm	Nr	6		-
K7	Reinstatement				
K732.1	Breaking up, temporary and permanent reinstatement of gravel road to the satisfaction of the Engineer. Nominal bore n.e. 500mm.	m	60		-
K751	Allow for reinstatement of surfaces after completion of the Works, all to the satisfaction of the Engineer.	m	60		-
	<u>CLASS L: PIPEWORK - ANCILLARIES TO LAYING AND EXCAVATION</u>				
	Extras to excavation in pipe trenches				
L111.1	Excavation in rock Class A	m ³	38		-
L111.2	-Ditto- but rock Class B	m ³	145		-
L111.3	-Ditto- but rock Class C	m ³	85		-
	Extras to excavation in manholes and manhole with backdrops				
L121.1	Excavation in rock Class A	m ³	41		-
L121.2	-Ditto- but rock Class B	m ³	41		-
L121.3	-Ditto- but rock Class C	m ³	41		-
PAGE TOTAL CARRIED TO Bill 4.2.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT BILL No 5.2.1: SEWERLINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bed, Haunches and Surrounds <i>Granular Material</i>				
L533	Prepare surface of trench, provide all materials and place imported granular bed and surround material for pipe, nominal diameter n.e. 500mm. Surround to be provided as per standard drawings and specifications	m	1,800		-
L54	Mass Concrete Surround (Provisional)				
L551	<i>Provide and place Mass concrete grade 20/20 in 150mm thick beds, haunches and surround for pipelines</i>				
L543.1	Nominal bore n.e. 450 mm. Surround Type A	m	50		-
L543.2	Nominal bore n.e. 450 mm.. Surround Type C	m	30		-
L543.3	Nominal bore n.e. 450 mm.. Surround Type D	m	20		-
PAGE TOTAL CARRIED TO Bill 4.2.1 COLLECTION PAGE					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT</u>				
Bill 4.2: SANITATION COMPONENT				
Bill 4.2.1 COLLECTION PAGE				
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Bill 4.2.1 TOTAL CARRIED TO Bill 4 COLLECTION PAGE				-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
Bill 4.2.2: SMALL ABLUTION BLOCK					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	DEMOLITIONS				
D421	Demolish by destructive means and cart away to disposal existing walls, slabs, beams and columns of the existing ablution block within a plinth area of 41SM	1	LS		-
	SUBSTRUCTURE				
	<u>Excavations</u>				
	<i>Rates for excavation to include for disposal</i>				
E411	Excavations to reduced levels n.e. 0.2 m deep and cart away	m ³ m ³ m ³	1.40		-
E412	Ditto 0.2 - 0.5m deep				
E412	Excavate for foundation trenches n.e 1.5 m deep from	m ³	1.40		-
E323	reduced level ditto.		71		-
E339	Extra over excavations for excavating in rock class B at any depth		12		-
	<u>Filling</u>				
	Filling to completed structures including compaction as specified.	m ³			
E611	Return fill and ram selected excavated materials around foundations		20		-
	Hardcore Filling	M ³ M ³			
	300mm Hardcore				
E612	50mm stone dust blinding to surface of hardcore		12		-
E612.1		M ²	2.3		-
	Damp Proof Membrane				
	Single layer of 1000gauge polythene sheeting laid on blinded hardcore with 150mm side laps to receive concrete		54		-
	Anti-termite treatment	M ²			
U482.1					
	Treat surface of hardcore with 'Dieldrin' or similar approved anti-termite solution applied strictly in accordance with the manufacturer's instructions		54		-
U482.2					
	CLASS F: CONCRETE WORK				
	Provide and Place Mass concrete Class 15/20	M ³			
	75mm Concrete 1:4:8 Blinding				
F511	Provide and Place Class 25/20	m ³ M ³	1.95		-
	Strip foundation				
F622	150mm Thick floor slab		8		-
F621			8.10		-
PAGE TOTAL CARRIED TO Bill 4.2.2 COLLECTION					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements					
MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	RATE (KShs)
G5	<u>CLASS G: CONCRETE ANCILLARIES</u>				-
High yield	steel bars to BS 4449 G522	kg	1280		-
	<u>Steel Fabric mesh reinforcement to B.S 4483</u>				
G562	BRC mesh fabric reinforcement ref A142 (weighing 2.2kg/m2) laid in Floor slab (measured net-no allowance)	M ²	50		-
FORMWORK					
	Sawn formwork (fair finish) to: -	M ²	16		-
G242.2	Vertical sides and Soffit of beams, columns	M ²	65		-
	<u>CLASS U: MASONRY</u>				
	Approved stone walling of minimum compressive strength of 10N/mm ² bedded in cement sand (1:3) mortar reinforced with and including gauge 12 hoop soft wire gauge hoop iron at every alternate course. Keying to be done on exterior wall surfaces for the superstructure	M ² M ² M	29 80		- -
	<u>Approved hessian based damp proof course</u>				
U882.1	200mm wide hessian based bituminous felt damp	M	42		-
U882.3	proofing course laid and bedded on cement sand (1:4)	M	11		-
PAGE TOTAL CARRIED TO Bill 4.2.2 COLLECTION					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
Bill 4.2.2: SMALL ABLUTION BLOCK					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	INTERNAL WALLING				
	Fine dressed natural stone walling bedded and jointed in cement and sand (1:4) mortar including reinforcing with 25mm wide hoop iron every alternate course				
U821.3	200mm thick walling	M ²	13		-
U821.4	150mm thick walling	m ²	28		-
	ROOF CONSTRUCTION & COVERING (PROVISIONAL)				
	CLASS O: TIMBER				
O123	75 x 150 mm Rafter: in trusses	M	56		-
O113	75x 125 mm: tie beam	M	38		-
O112	100 x 50 mm: Struts and ties	M	54		-
O115	50 x 75 mm Wall plate: fixed to concrete with approved bolts at 1000 mm centres	M	54		-
O116	50 x 100 mm purlins	M	123		-
O113	300 x 25 mm Fascia Board	M	30		-
O55	Steel angle cleats 50 x 25 x 100mm - 3mm thick	Nr	20		-
O54	16mm diameter high density rawl bolt 150mm long built into beam: including nut and washer	Nr	80		-
	CLASS N: MISCLEANOUS METAL WORK				
	Cladding				
N21	28 gauge IT5 sheeting-proofing	M ²	179		-
N22	Ridge cap	M	12		-
	The Contractor to allow in his rate for gusset plates, brackets, bolts etc to the structure connections				
M361	Allowance for steel roof structure comprising RHS top and bottom cords, struts and ties and z purlins all to structural Engineers drawings and details	M ²	80		-
	Sheet covering				
	Approved Asphalt shingles laid on steel roof structure and fixed as per manufactures instructions including all required accessories as ends, barrels, trims and flashings				
W321	Roof covering	M ²	159		-
	Wrot Cypress				
O241	250 x 030mm fascia or barge board	M	70		-
	Eaves Fillings				
O241.2	PVC tounge and grooved eaves fillings with mosquito gauge and ventilation opening to approval	M ²	21		-
	Rainwater disposal (All provisional)				
	Approved PVC Gutter				
X331	U-shaped Pvc gutter fixed to fascia board with approved means complete with all associated fittings	LM	28		-
X332	100mm Diameter down pipes fixed to wall with brackets at 1200c/c	LM	14		-
	CLASS V: PAINTING				
	Knot, prime and prepare and apply three coats gloss exterior oil paint on wood surfaces to:				
V326	General surfaces of wood	M ²	26.00		-
PAGE TOTAL CARRIED TO Bill 4.2.2 COLLECTION					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
Bill 4.2.2: SMALL ABLUTION BLOCK					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	SHELVES, WINDOWS AND DOORS				
Z312	Mazeras window coping Windows sill size 200x25mm once sunk, weathered and throated, with 10mm drip paint to approval <i>Supply and Fix the following purpose made steel windows and door as per detail manufactured from heavy duty standard sections primed with one coat of red oxide primer and fixing to masonry or concrete head and jambs complete with closing mechanism and other fittings.</i>	M	14		-
Z311	Window size 1200 x 900 mm high overall DOORS	Nr	4		-
Z313	Glazed single swing door overall size 900 x 2100mm high Supply and fix the following 45mm thick (finished) semi solid core flush door faced both sides with interior quality plywood hardwood lipped all round all to architects details and approval	Nr	3		-
Z313.2	Door size 900x 2100mm high Ironmongery Supply and fix the following ironmongery complete with matching screws as per union catalogue or other aqual and approved	Nr	6		-
Z343.1	3-lever mortice door lock	NO	3		-
Z343.2	2-lever mortice door lock	NO	6		-
Z341	100mm heavy duty steel butt hinges	NO	30		-
Z342	Approved rubber door stop	NO	9		-
	CLASS V: PAINTING AND DECORATING				
	Prepare and apply one coat aluminium primer on back of wood before fixing				
V126.1	Surfaces not exceeding 100mm girth	M	68		-
V126.2	Surfaces 200-300mm girth	M	68		-
	Prepare and apply three coats gloss oil paint to wood surfaces internally				
V326.1	General surfaces over 100 and not exceeding 200mm girth	M	66		-
V326.2	Surfaces 200-300mm girth	M	54		-
V326.3	General surfaces of doors	M ²	45		-
	EXTERNAL WALL FINISHES				
	15mm thick render as described to :				
W168.1	Sides of concrete or stone block surfaces	M ²	90		-
W168.2	Doors and Windows reveals not exceeding 100mm girth	M ²	53		-
G812	12mm thick external rendering to plinth surfaces finished smooth with a wood float	M ²	11		-
	Prepare and apply one undercoat and two coats approved exterior paint to:				
V756.1	Externally rendered surfaces	M ²	97		-
V756.2	Ditto but not exceeding 100mm girth	M	50		-
V3	Allow a PC sum for branding and paintworks on the ablution block with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	PC			-
PAGE TOTAL CARRIED TO Bill 4.2.2 COLLECTION					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
Bill 4.2.2: SMALL ABLUTION BLOCK					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	INTERNAL WALL FINISH				
	20mm thick gauged lime plaster (1:2:9) as described to:				
	Sides of walls or concrete surfaces				
G812.1	Door and window reveals not exceeding 100mm girth	M ² M ²	155		-
G812.2			79		-
	Approved ceramic wall tiles as described				
	200 x 300mm Thick coloured wall tiles laid on backing (measured separately) and joints filled in approved filler to match colour of tiles	M ²	48		-
N531.1					
	PAINTING AND DECORATING				
	Prepare and apply three coats plastic emulsion paint to:				
	Plastered walls	M ² M			
V531.1	Door and window reveals not exceeding 100mm girth.		200		-
V531.2			92		-
	FLOOR FINISHES				
14					
	Cement and sand (1:4) screed as described in:				
	22mm thick backing to receive ceramic floor tiles	M ²	50		-
N531.2					
PAGE TOTAL CARRIED TO Bill 4.2.2 COLLECTION					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
Bill 4.2.2: SMALL ABLUTION BLOCK					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
N531.3	300x300x8mm approved non-slip ceramic tiles on screed backing (m.s) with straight joints and pointing in matching cement to floors	M ²	49		-
N531.4	100mm high skirting	M ²	4		-
Z801.1	CEILING FINISHES 12.5mm thick chip board ceiling including 100x50mm and 50x50mm bradering at 600mm centers both ways	M ²	50		-
V531.3	PAINTING Prepare and apply one undercoat and three finishing coats of interior quality paint as crown solo pure satin emulsion or other equal and approved to Surfaces of chipboard ceilings	m ²	50		-
Z524	CLASS I: PIPEWORK - PIPES Drainage system Install Asian type ceramic water closet (WC) squat pan Include connecting to water supply line in the plot and all necessary PPR pipes & fittings.	No.	1		-
Z531	Install Ceramic handwash Basin complete with tap and fittings. Include connecting to water supply line in the plot and all necessary PPR pipes & fittings.	No.	1		-
I511.1	Drainage and vent pipes PVC Waste pipes and Fittings including fixing and jointing in accordance 4" MG grey waste water pipe	m	30		-
I511.2	2" M/G waste pipes	m	18		-
I511.3	1 1/2" waste pipe	m	36		-
I511.4	6" waste pipe	m	18		-
I512.0	100mm nominal bore uPVC pipe class B in trench, depth n.e 1.5m	m	60		-
J411.1	4" waste inspection bend	No.	9		-
J411.2	4" waste bend	No.	9		-
I511.5	4" waste pipe	m	30		-
J421.1	4" waste TEE	No.	6		-
J421.2	2" waste TEE	No.	8		-
J411.3	2" waste bend	No.	9		-
J421.3	1 1/2" waste TEE	No.	6		-
Z511	Water Supply System: 25mm diameter G1 class 'B' pipe to BS 1387, thread joints to BS 21 for interconnection from mains to tank and to the service/ draw off points	m	30		-
I311	1/2" GI pipes	m	20		-
Total carried to Bill 4.2.2 collection page					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements					
MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	RATE (KShs)
	25mm nominal bore G1 fittings as follows				
Z 512.1	Unions	Nr	4		-
512.2	Elbows	Nr	6		-
Z 512.3	Bends	Nr	4		-
Z 512.4	Nipples	Nr	15		-
Z 512.5	Long thread nipples	Nr	12		-
Z 512.6	Equal tees	Nr	2		-
Z 512.7	Back nuts	Nr	4		-
Z 512.8	Pegler (or equivalent) gate valves	Nr	2		-
Z 512.10	Floater valve complete	Nr	1		-
Z 512.11	DN 25 mm cold water meter (Multijet, Brass body)	Nr	1		-
Z 524	5,000 litre plastic water tank supported on Roof slab. Roto tank or equivalent to approved by the engineer before supply	Nr	1		-
	CLASS K: PIPEWORK - MANHOLES AND PIPEWORK				
	ANCILLARIES				
K131	Excavate for, provide all materials and construct 600 x 450mm Masonry Inspection Chamber, in accordance with drawings. Include for provision and fixing of light duty rectangular GRP frame and cover. The rate should be inclusive of two flexible joints adjacent to the Inspection Chamber as detailed. and provision of boxout and sealing for all pipes. Depth not exceeding 1.5m	Nr	1		-
	Electric Lighting and Power Installation				
	Supply and installation of electrical fixtures				
Z614	25 mm ² x 3 PVC single cables in 32 mm dia. conduit from distribution board to cable termination box	item	1		-
	Conduit and Accessories				
	Supply and install the following conduit cast into concrete or screed, chased into concrete or brickwork, and surface mounted for electrical including couplings, bushes, locknuts, cutting bending, fixing draw boxes ect in accordance with the specification				
Z721.1	20mm dia PVC Conduit	m	80		-
Z721.2	25mm dia PVC	m	40		-
Z723	Meter box	No.	1		-
Z788	Fluorescent 4ft tube holders	No.	4		-
Z721.3	20mm conduit bend	No.	20		-
Z721.4	25mm conduit bend	No.	20		-
Z788.2	Ceiling rose	No.	8		-
Z788.3	Saddle clips	No.	5		-
	PVC Insulated Wire				
	Supply and install the following 600/1000V grade PVC insulated wire into conduit				
Z772.1	1.5mm ²	m	270		-
Z772.2	2.5mm ²	m	30		-
	Supply, install and connect lighting switches				
Z782.1	3 GANG switch	No	1		-
Z782.2	2 Gang switch	No	1		-
Z784.1	Supply and install 13 Amp. single switch socket outlets	No	1		-
	and 10A circuit breaker	No	1		-
Total carried to Bill 4.2.2 collection page					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements</u> MARIGUINI SETTLEMENT	
Bill 4.2: SANITATION COMPONENT	
Bill 4.2.2 COLLECTION PAGE	
Summary Page 7	-
Summary Page 8	-
Summary Page 9	-
Summary Page 10	-
Summary Page 11	-
Summary Page 12	-
Summary Page 13	-
Bill 4.2.2 TOTAL CARRIED TO Bill 4.2 COLLECTION PAGE	-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
Bill 4.2.3 - CUSTOMER CONNECTIONS (TYPE A)					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<p>FOR PLOTS WITHIN EXISTING POUR PLUSH FACILITIES BUT NOT CONNECTED TO SEWER Approximate No. of Connections is 200</p> <p>The connection works are to be carried out in liason with with the respective Water Service Provider, who will receive, process and approve the applications for connections as per technical specification.</p> <p>The Contractor to confirm with Resident Engineer the exact number of connections and their locations before ordering materials and carrying out any works under this Bill.</p> <p>Consumer Connection Works will commence during the Construction Period and minimal works can extend to the Defects Liability Period (DLP). The connections will be carried out as soon as the sewers are commissioned.</p> <p>Taking Over will be on completion of the Connections. The Contractor should allow for this in their rates. There will be no extra cost of carrying out the Connection Works during DLP.</p> <p><u>CLASS A: GENERAL ITEMS</u></p> <p><u>Specified Requirements</u></p>				
A2					
A260	Allow for water testing of the sewer connection including sewer pipes and inspection chambers as specified including all requisite Materials, Personnel, Testing Equipment etc.	m	20.0		-
A277	Allow for keeping trenches and other excavation free of water which may have entered through ground seepage, rain or by other means as directed by the Engineer.	Item	LS		-
	<p><u>CLASS I - PIPEWORK</u></p> <p><u>A - Supply of Pipes</u> The rate to include jointing materials, bolts, gaskets, rubber rings, etc.</p>				
I511	DN 160 mm UPVC sewer pipe SN 8	m	20		-
Bill 4.2.2 TOTAL CARRIED TO Bill 4.2 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
Bill 4.2.3 - CUSTOMER CONNECTIONS (TYPE A)					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	B - Pipe Laying The rate quoted shall be deemed to include excavation and backfilling with selected excavated material, of pipe trenches. The rates shall also include disposal of surplus material to approved tips, transport of material from site store to working areas, laying and jointing of pipes. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of the all Pipeline Routes, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works				
I512	Depth not exceeding 2m	m	20.0		-
	CLASS J: PIPE FITTINGS				
	45° DWC Y-Junctions Supply, transport, lay, joint and test, 45° PCC Y junctions. The rate to include lean concrete plug, jointing material, rubber rings etc.				
J423.1	DN 150 mm branch off DN 250 mm Mainline	Nr	1		-
	CLASS K: MANHOLES AND PIPEWORK ANCILLARIES				
K21	Masonry Inspection Chambers				
K211	Excavate for, provide all materials and construct 600 x 450mm Masonry Inspection Chamber, in accordance with drawings. Include for provision and fixing of light duty rectangular GRP frame and cover. The rate should be inclusive of two flexible joints adjacent to the Inspection Chamber as detailed. and provision of boxout and sealing for all pipes. Depth not exceeding 1.5m	Nr	1.0		-
K651	Allow for crossing existing boundary wall/ fence, including reinstatement to original state. Pipe nominal bore not exceeding 150mm (Provisional)	Nr	1.0		-
K671	Allow for crossing existing lined drains and reinstate after construction of sewer. Pipe nominal bore n.e. 150mm (Provisional)	Nr	1.0		-
	CLASS L: PIPEWORK - ANCILLARIES TO LAYING AND EXCAVATION				
	<u>Extras to excavation and backfilling in pipe trenches</u>				
L111.1	Excavation in rock Class A	m3	0.2		-
L111.2	Excavation in rock Class B	m3	0.1		-
L111.3	Ditto- but rock Class C	m3	0.1		-
	CLASS X: MISCELLANEOUS WORKS				
X51	Final Connection to Inspection Chamber Allow for provisional sum for individual connection to provided inspection chamber. Rate to include all pipes and fittings	Nr	1.0		-
PAGE TOTAL CARRIED TO Bill 4.2.2 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT					
Bill 4.2: SANITATION COMPONENT					
Bill 4.2.3 - CUSTOMER CONNECTIONS (TYPE A)					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill 4.2.3 Collection Page				
	Total Page 1				-
	Total Page 2				-
	COST FOR ONE (1) CONSUMER CONNECTION				-
	COST FOR 200 CONNECTIONS	Nr	200	-	-
Bill 4.2.3 TOTAL CARRIED TO Bill 4 SUMMARY					-

BILL 4.2.4- CUSTOMER CONNECTIONS (TYPE B)					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<p>This bill is for plots with pit latrines to be covered to Pour Flush Toilets and Connected to Sewer. The quantities below are for 1No. Typical Plot connection.</p> <p><u>CLASS D: DEMOLITION AND SITE CLEARANCE</u> <u>DEMOLITION OF EXISTING SUPERSTRUCTURE</u> <i>Provide for careful demolition of existing structure set aside re-usable materials and dispose the waste</i></p>				
D331.1	Demolish Superstructure walls, door, roof etc.	Item	1.00		
D331.2	Demolish Existing Latrine floor slab	SM	3.00		
	<p><u>CLASS E: EARTHWORKS</u> <i>Rate to include provision and compaction of backfill material and a 50 mm thick quarry dust blinding at the top to receive concrete</i></p>				
E617	Backfill exhausted pit with Hardcore and compact to satisfaction of Engineer	m ³	3.00		
	<p><u>CLASS I - PIPEWORK</u> <u>INSTALLATION OF POUR FLUSH SYSTEM AND PLUMBING WORKS</u> <i>Rate to include provision of material and construction</i></p>				
I521.1	Install OD110 mm UPVC Class 41 Sewer Pipe from W.C to Inspection Chamber	m	5.00		
I712.1	Install DN 150 mm DWC SN8 Sewer Pipe from the Inspection Chamber to connect to nearby sewer manhole	m	10.00		
	<p><u>CLASS K: MANHOLES AND PIPEWORK ANCILLARIES</u> <i>Rate to include provision of material and construction</i></p>				
K211	Construct a 450 x 600mm (internal) masonry Inspection Chamber, depth n.e. 1.5m. Rate to include provision of a Polyresin air tight cover.	Nr	1.00		
PAGE TOTAL CARRIED TO BILL 4.2.4 COLLECTION PAGE					

BILL 4.2.4 - CUSTOMER CONNECTIONS (TYPE B)					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>CLASS Z: SIMPLE BUILDING WORKS</u> <i>Rate to include provision of material and construction</i>				
Z524	Install Asian type ceramic water closet (WC) squat pan Include connecting to water supply line in the plot and all necessary PPR pipes & fittings.	No.	1.00		
Z531	Install Ceramic handwash Basin complete with tap and fittings. Include connecting to water supply line in the plot and all necessary PPR pipes & fittings.	No.	1.00		
	<u>CLASS U: MASONRY</u>				
	<u>RECONSTRUCTION OF SUBSTRUCTURE WORKS</u>				
U821.1	Supply 100-200mm thick dressed masonry stones for replacement of those broken during demolition	SM	6.00		
U821.2	Construct 100-200mm thick single skin masonry wall built of recovered or new stones in 1:3 cement and sand mortar in superstructure.	SM	13.40		
	<u>CLASS F: CONCRETE WORK</u> <i>Rate to include provision of material and construction</i>				
F621	Construct 100mm thick class 20/20 floor slab. Including formwork	m3	0.20		
	<u>CLASS G: CONCRETE ANCILLARIES</u>				
G562	Provide and install A142 BRC mesh for the floor slab	SM	2.10		
G812.1	Provide 25mm thick cement screed floor finish.	m ²	2.00		
G812.2	Apply 2 coats gauged lime (1:2:9) plaster to internal surface of walls.	m ²	10.00		
	<u>CLASS V: PAINTING</u>				
V325.1	Apply Three coats of oil paint to doors and frames	m2	2.00		
V325.2	Apply Two coats of oil paint to plastered internal surfaces of walls.	m2	10.00		
	<u>CLASS U: WATERPROOFING</u>				
W500	Anti termite chemical treatment with "Terminator" or any other similar and approved agent on blinding surface.	SM	2.10		
W138	1000mm gauge polythene sheeting with sides and end laps, laid on blinded surface.	SM	2.10		
W321	ALUZINC sheet Metal roofing, N.C 11/3" Corrugated sheets and BP760 Boxed Profile 28G and installation	SM	2.10		
PAGE TOTAL CARRIED TO BILL 4.2.4 COLLECTION PAGE					
BILL 4.2.4 - CUSTOMER CONNECTIONS (TYPE B)					

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 4.2.4 Collection Page Total Page 1 Total Page 2				
	COST FOR ONE (1) CONSUMER CONNECTION TYPE B				
	COST FOR 50 CONNECTIONS	Nr	50		

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements MARIGUINI SETTLEMENT</u>		
Bill 4.2: SANITATION COMPONENT		
<u>BILL 4.2.- COLLECTION PAGE</u>		
ITEM	DESCRIPTION	AMOUNT (KShs)
	Bill 4.2 COLLECTION PAGE	
	TOTAL Bill 4.2.1 - SEWERS	-
	TOTAL Bill 4.2.2 - SMALL ABLUTION BLOCK	-
	TOTAL Bill 4.2.3 - CUSTOMER CONNECTIONS (TYPE A)	-
	TOTAL Bill 4.2.4 - CUSTOMER CONNECTIONS (TYPE B)	
Bill 4.2 TOTAL CARRIED TO Bill 4 SUMMARY PAGE		-

NAIROBI WATER AND SANITATION PROJECT		
Water and Sanitation Works in the Nairobi Informal Settlements		
Mariguini Settlement		
Bill Summary		
BILL	ITEM DESCRIPTION	AMOUNT, KSHS.
Bill 4.1	Water Component	-
Bill 4.2	Sanitation Component	-
BILL 4.0 TOTAL CARRIED TO BILL GRAND SUMMARY PAGE		-
SIGNATURE OF BIDDER:		
NAME OF AUTHORIZED REPRESENTATIVE:		
COMPANY STAMP:		
DATE:		

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NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.1: WATER COMPONENT					
Bill 5.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>CLASS J: PIPE WORK - FITTINGS AND VALVES</u> <u>(Provisional)</u> <i>Provide and Install (Rate to include supply of jointing materials, Stainless steel bolts, nuts, gaskets etc as applicable)</i> <u>HDPE PN16 Bends</u> OD 63 mm				
J611.7	45°	Nr	3		-
J611.8	90°	Nr	3		-
PAGE TOTAL CARRIED TO Bill 5.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.1: WATER COMPONENT					
Bill 5.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
J911.1	<p><u>Water Meters</u> <i>Rate to include T associated fittings</i> MultiJet bulk cold water meters. Water meters to be as specified in Clause 404.10 of the specifications</p> <p>DN 25mm</p>	nr	3		-
	<p><u>ANCILLARY WORKS</u></p> <p>Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings.</p> <p><u>Note:-</u> Items for work in this class shall include:- - Excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, masonry blocks, reinforcement, formwork, joints and finishes. - Tips for disposal of excavated material or debris to be identified by the Contractor in liaison with the Local Authority.</p> <p><u>In Situ Chambers</u></p> <p>Provide all materials and construct Valve chamber internal dimensions 4,000mm x 2,000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing</p>				
K112.1	<p>Depth: not exceeding 2.0 m</p>	nr	4		-
PAGE TOTAL CARRIED TO Bill 5.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.1: WATER COMPONENT					
Bill 5.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
K82.4	<u>Marker Posts</u> <i>Provide and install RC standard marker posts for:</i> Along Pipeline at 300 m spacing and at change of directions, , inscribed "MAJI" and Diameter of the Pipeline <u>CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u> <i>Extras over excavation and backfilling for excavation in Rock. Rate to include carting away and disposal. In pipe trench and chambers (Provisional).</i>	nr	3		-
L111.1	Excavation in trench for rock class "A"	m ³	16		-
L111.2	Excavation in trench for rock class "B"	m ³	21		-
L111.3	Excavation in trench for rock class "C"	m ³	16		-
	Note:- Blasting is NOT permitted for Item L11				
PAGE TOTAL CARRIED TO Bill 5.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.1: WATER COMPONENT					
Bill 5.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
L531	Imported Granular Fill (Provisional) <i>Provide, transport to site and place imported granular material and compact in bed (100 mm thick) and surround to pipes (200 mm thick) as per standard drawings</i> Surround To pipes nominal bore: n.e. 150 mm	m	150		-
X51	CLASS X:- MISCELLANEOUS Supply and install with item decrypted before, tracable warning tape, permanently imprinted with= "CAUTION WATER PIPE", color= blue, width= 50mm, thickness= 5mm.	m	150		-
PAGE TOTAL CARRIED TO Bill 5.1.1 COLLECTION PAGE					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT</u>					
Bill 5.1: WATER COMPONENT					
Bill 5.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill 5.1.1 SUMMARY PAGE				
1	From page 1				-
2	From page 2				-
3	From page 3				-
4	From page 4				-
5	From page 5				-
Bill 5.1.1 TOTAL CARRIED TO Bill 5.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.1: WATER COMPONENT					
Bill 5.1.2 - CONSUMER CONNECTIONS					
ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	Unit Rate (Kshs)	Amount (Kshs)
9.3	BILL 5.1.2- WATER CONSUMER CONNECTIONS Last Mile Water connections are limited by the connections identified by the employer. The Contractor to confirm with Resident Engineer the exact number of connections and their locations before ordering materials and carrying out any works under this Bill.				
	Typical 1 connection				
CLASS I	PIPEWORK- PIPES				
I14*	Provide, lay and joint HDPE PN16 pipes Rate to to include excavation and backfilling of trenches, depth not exceeding 1.5 m. Include for preparation of trench surfaces; upholding sides of the excavation, disposal of excess excavated material, removal of dead services				-
I411	Nominal bore 13mm inclusive of valve sockets	m	45		-
CLASS J	PIPEWORK- FITTINGS AND VALVES Provision and installation of fittings and valves Junctions and branches - Tees or Saddles				-
321.1	DN 37 x 15 threaded branch	Nr	0		-
321.2	DN 40 x 15 threaded branch	Nr	0		-
321.3	DN 50 x 15 threaded branch	Nr	0		-
321.4	DN 63 x 15 threaded branch	Nr	1		-
321.5	DN 75 x 15 threaded branch	Nr	0		-
321.6	DN 90 x 15 threaded branch	Nr	0		-
321.7	DN 100 x 15 threaded branch	Nr	0		-
321.8	DN 125 x 15 threaded branch	Nr	0		-
321.9	DN 150 x 15 threaded branch	Nr	0		-
321.1	DN 200 x 15 threaded branch	Nr	0		-
	Double collars/ Couplings				-
J341	One size per connection as directed by the Engineer	Nr	0		-
J342	For GI pipe nominal bore (37mm)	Nr	0		-
J343	For GI pipe nominal bore (40mm)	Nr	0		-
J344	For GI pipe nominal bore (50mm)	Nr	1		-
J345	For GI pipe nominal bore (63mm)	Nr	0		-
J346	For GI pipe nominal bore (75mm)	Nr	0		-
J347	For GI pipe nominal bore (90mm)	Nr	0		-
J348	For GI pipe nominal bore (100mm)	Nr	0		-
J349	For GI pipe nominal bore (125mm)	Nr	0		-
J350	For GI pipe nominal bore (150mm)	Nr	0		-
	For GI pipe nominal bore (200mm)	Nr	0		-
J411	Bends/ elbows Nominal bore 15mm	Nr	5		-
J811.1	Gate valves to BS 5163, PN 16, flanged to BS 4772 Nominal bore 15mm		2		-
J811.2	Stop cork tap nominal bore 15mm	Nr	1		-
J811.3	Water meter DN 15 mm	Nr	1		-
CLASS K : PIPEWORK- MANHOLES AND PIPEWORK ANCILLARIES					
K651	Allow for crossing existing boundary walls, including reinstatement to original state. Nominal n.e. 20mm	Nr	1		-
K661	Allow for crossing existing fences (chain link, barbed wire, hedge etc.) including reinstatement to original state. Nominal bore n.e 20mm	Nr	1		-
K671	Allow for sewer/ drain crossings	Nr	1		-
K678	Allow for underground telephone and power services crossings	Nr	1		-
K731	Allow for breaking, and temporary and permanent reinstatement of murrum roads	Nr	3		-
K741	Allow for breaking up, temporary and permanent reinstatement of murrum foot paths	Nr	3		-
K810	Allow for reinstatement of drains	Nr	1		-
K861	Allow for connection to mains	Nr	1		-
K861	Allow for installation of prefabricated Meter box	Nr	1		-
CLASS L: PIPEWORK- SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION					
L11	Excavation in rock various classes (0.045m ³ /m)		90		-
	Total a Typical Water Connection Total Amount for				-
Bill 5.1.2 TOTAL CARRIED TO Bill 5.1 SUMMARY PAGE					-
Bill 5.1.2 TOTAL CARRIED TO Bill 5.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.1: WATER COMPONENT					
BILL 10.1.3- WATER POINTS (PPDS)					
ITEM No.	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	Installation of PPDS <u>Rates to include full construction/ installation and commissioning</u>				
X92.1	Excavate for, provide all materials and construct prepaid water dispenser chamber in accordance with the tender drawings & specifications	nr	1	50,000.00	
X92.3	Supply, install, test and commission prepaid meter dispenser and with 2 draw-off taps. Rate to include for provision of wiring and pipework comprising of 2 valves, meter and tees all of 1/2" diameter, in accordance with the Tender drawings & Specifications	nr	1	250,000.00	
X92.3	Provision and installation of 5 m³ plastic tank (Approved by engineer) and pipework interconnection to the Water ATM (within 5m distance) with a 1 inch PPR pipes.	nr	1	100,000.00	
X92.5	Fabrication and erection of steel tower to support the storage tank. Rate to include construction of RC bases and column stubs in accordance with design & Shop drawings approved by Resident Engineer A masonry base can be used as an alternative to Steel tower when determined appropriate by the Resident Engineer - A circular masonry base 2.2 m diameters and 0.5 m high (at the Stand Pipe/ Water ATM) for the storage tank. The inside of the base to be filled with well compacted hardcore and covered with a mass concrete slab 100 mm thick. Contract rates to be applied.	nr	1	450,000.00	
V3	Allow a PC sum for branding and paintworks with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	PC			
Bill 5.1.3 TOTAL CARRIED TO Bill 5.1 COLLECTION PAGE					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT</u>		
Bill 5.1: WATER COMPONENT		
BILL 5.1.- COLLECTION PAGE		
ITEM	DESCRIPTION	AMOUNT (KShs)
	Bill 5.1 COLLECTON PAGE TOTAL Bill 5.1.1 - WATERLINES TOTAL Bill 5.1.2 - CONSUMER CONNECTIONS TOTAL Bill 5.1.3 - WATER POINTS (PPDs)	 - - -
Bill 5.1 TOTAL CARRIED TO Bill 5 SUMMARY PAGE		-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.2: SANITATION COMPONENT Bill 5.2.1 - SEWERS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<p>These works are to be carried out along narrow wayleaves where there may be some existing active services (electrical, water, e.t.c). This should be considered in the Contractor's rates. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of sites for structures, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works</p> <p>Specific conditions in execution of these Works are deemed to be included in the Contractor's rates. These include but are not limited to the following:</p> <ul style="list-style-type: none"> i. No blasting will be permitted in these areas ii. The Contractor to avoid prolonged interruption of utility services iii. Pedestrian and vehicular Access to individual shops / plots to be maintained at all times iv. Safety hoarding, lighting, bands, warning signs, etc. to be maintained at all times. v. Condition of wayleave. <p><u>CLASS A: GENERAL ITEMS</u></p> <p>A2 Specified Requirements</p> <p>A260.1 Allow for testing of sewers in accordance with specification. Rate to include provision of Materials, Personnel, Testing Equipment etc: Pipe diameter 300 mm</p> <p><u>CLASS B: SITE INVESTIGATION</u></p> <p>B112 Trial holes where ordered to prove location, construction size etc of pipelines, services or existing structures. Depth n.e 3m (Provisional)</p> <p><u>CLASS D: DEMOLITION AND SITE CLEARANCE</u></p> <p><u>Rate to include cart away to approved tips</u></p> <p>D1 Site Clearance</p> <p>D110 General clearance along the sewerline 3 m wide</p>				
		m	800		-
		nr	4		-
		m	800.00		-
PAGE TOTAL CARRIED TO Bill 5.2.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.2: SANITATION COMPONENT					
Bill 5.2.1 - SEWERS					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
D3	Removal of Stumps (Provisional)				
	Grub up stumps and roots and cart away to tips				
D310	Girth: n.e. 1.0 m	nr	4		-
D320	Girth: over 1 m	nr	4		-
	Note: Girth shall be measured 0.5 m above ground level				
D561	Buildings of indeterminate construction volume not exceeding 50-100m ³	nr	2		-
D562	Buildings of indeterminate construction volume not exceeding 50m ³	nr	2		-
D563	Other structures of indeterminate construction Volume not exceeding 50m ³	nr	2		-
D564	Other structures of indeterminate construction Volume not exceeding 50-100m ³	nr	2		-
15	CLASS I : PIPEWORK - PIPES A - SUPPLY OF PIPES Supply, Transport to Site and Store Precast Concrete pipes in accordance to Technical Specifications Sockets and spigots for PCC as directed by the Engineer. SOCKET AND SPIGOT PRECAST CONCRETE PIPES				
I523.1	Supply DN 300mm PCC	m	800		-
	B - PIPE LAYING The rate quoted shall be deemed to include excavation and backfilling with selected excavated material, of pipe trenches. The rates shall also include disposal of surplus material to approved tips, transport of material from site store to working areas, laying and jointing of pipes. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of the all Pipeline Routes, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works				
PAGE TOTAL CARRIED TO Bill 5.2.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.2: SANITATION COMPONENT					
Bill 5.2.1 - SEWERS					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
I532	Nominal bore: 300 mm in trenches				
I533	Depth not exceeding 1.5m	m	450		-
I534	Depth 1.5m - 2.0m	m	58		-
	Depth 2.0 m - 2.5m	m	42		-
CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES					
K13	In Situ Concrete Manholes				
	The rates entered shall include excavation in material other than rock, construction of the manhole, reinforced concrete cover slab, installation of heavy duty (40 tonnes) glass reinforced plastic/fibre reinforced plastic frame and manhole triangle covers, step irons, backdrop and fittings where necessary, excavation for working, trimming the base of the excavation, shuttering where necessary, backfilling and compaction around the finished manhole and disposing of surplus soil, spreading and making good.				
K151	Reinforced Manhole internal diameter 1050mm, depth n.e. 1.5m				
K 152	Ditto but Depth 1.5 - 2.0 m	nr	2		-
K 153	Ditto but Depth 2.0 - 2.5 m	nr	3		-
K652	Allow for crossing existing masonry boundary walls, including reinstatement to original state. Nominal bore not exceeding 400mm	Nr	2		-
PAGE TOTAL CARRIED TO Bill 5.2.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.2: SANITATION COMPONENT Bill 5.2.1 - SEWERS					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
K671	Allow for crossing existing lined drains and sewers, and reinstate these after construction of sewer has been completed. Pipe inside diameter n.e. 450mm	Nr	3		-
K7	Reinstatement				
K732.1	Breaking up, temporary and permanent reinstatement of gravel road to the satisfaction of the Engineer. Nominal bore n.e. 450mm.	m	50		-
	<u>CLASS L: PIPEWORK - ANCILLARIES TO LAYING AND EXCAVATION</u>				
	Extras to excavation in pipe trenches				
L111.1	Excavation in rock Class A	m ³	202		-
L111.2	-Ditto- but rock Class B	m ³	269		-
L111.3	-Ditto- but rock Class C	m ³	202		-
	Extras to excavation in manholes and manhole with backdrops				
L121.1	Excavation in rock Class A	m ³	26		-
L121.2	-Ditto- but rock Class B	m ³	35		-
L121.3	-Ditto- but rock Class C	m ³	26		-
PAGE TOTAL CARRIED TO Bill 5.2.1 COLLECTION PAGE					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT</u>					
Bill 5.2: SANITATION COMPONENT					
<u>Bill 5.2.1 - SEWERS</u>					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
L533	Bed, Haunches and Surrounds <i>Granular Material</i> Prepare surface of trench, provide all materials and place imported granular bed and surround material for pipe, nominal diameter n.e. 300mm. Surround to be provided as per standard drawings and specifications	m	800		-
	<u>CLASS X:- MISCELLANEOUS</u>				
X51	Supply and install with item decrypted before, traceable warning tape, permanently imprinted with= "CAUTION WATER PIPE", color= blue, width= 50mm, thickness= 5mm.	m	800		-
PAGE TOTAL CARRIED TO Bill 5.2.1 COLLECTION PAGE					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT</u>					
Bill 5.2: SANITATION COMPONENT					
	Bill 5.2.1 COLLECTION PAGE				
	From Page 1				-
	From Page 2				-
	From Page 3				-
	From Page 4				-
	From Page 5				-
Bill 5.2.1 TOTAL CARRIED TO Bill 5.2 SUMMARY					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.2: SANITATION COMPONENT					
Bill 5.2.2 - CUSTOMER CONNECTIONS (TYPE A)					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	FOR PLOTS WITHIN EXISTING POUR PLUSH FACILITIES BUT NOT CONNECTED TO SEWER Approximate No. of Connections is 90 The connection works are to be carried out in liason with with the respective Water Service Provider, who will receive, process and approve the applications for connections as per technical specification. The Contractor to confirm with Resident Engineer the exact number of connections and their locations before ordering materials and carrying out any works under this Bill. Consumer Connection Works will commence during the Construction Period and minimal works can extend to the Defects Liability Period (DLP). The connections will be carried out as soon as the sewers are commissioned. Taking Over will be on completion of the Connections. The Contractor should allow for this in their rates. There will be no extra cost of carrying out the Connection Works during DLP.				
	CLASS A: GENERAL ITEMS				
A2	Specified Requirements				
A260	Allow for water testing of the sewer connection including sewer pipes and inspection chambers as specified including all requisite Materials, Personnel, Testing Equipment etc.	m	20.0		-
A277	Allow for keeping trenches and other excavation free of water which may have entered through ground seepage, rain or by other means as directed by the Engineer.	Item	LS		-
	CLASS I - PIPEWORK				
	A - Supply of Pipes The rate to include jointing materials, bolts, gaskets, rubber rings, etc.				
I511	DN 150 mm UPVC sewer pipe SN 8	m	20		-
PAGE TOTAL CARRIED TO Bill 5.2.2 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT					
Bill 5.2: SANITATION COMPONENT					
Bill 5.2.2 - CUSTOMER CONNECTIONS (TYPE A)					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	B - Pipe Laying The rate quoted shall be deemed to include excavation and backfilling with selected excavated material, of pipe trenches. The rates shall also include disposal of surplus material to approved tips, transport of material from site store to working areas, laying and jointing of pipes. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of the all Pipeline Routes, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions, Traffic regulation; establishment, operation and removal for works				
I512	Depth not exceeding 2m	m	20.0		-
	45° DWC Y-Junctions Supply, transport, lay, joint and test, 45° PCC Y junctions. The rate to include lean concrete plug, jointing material, rubber rings etc.				
J423.1	DN 160 mm branch off DN 450 mm Mainline	Nr	1		-
	CLASS K: MANHOLES AND PIPEWORK ANCILLARIES Masonry Inspection Chambers Excavate for, provide all materials and construct 600 x 450mm Masonry Inspection Chamber, in accordance with drawings. Include for provision and fixing of light duty rectangular GRP frame and cover. The rate should be inclusive of two flexible joints adjacent to the Inspection Chamber as detailed. and provision of boxout and sealing for all pipes. Depth not exceeding 1.5m				
K21					
K211		Nr	1.0		-
K651	Allow for crossing existing boundary wall/ fence, including reinstatement to original state. Pipe nominal bore not exceeding 150mm (Provisional)	Nr	1.0		-
K671	Allow for crossing existing lined drains and reinstate after construction of sewer. Pipe nominal bore n.e. 150mm (Provisional)	Nr	1.0		-
	CLASS L: PIPEWORK - ANCILLARIES TO LAYING AND EXCAVATION Extras to excavation and backfilling in pipe trenches				
L111.1	Excavation in rock Class A	m3	4.0		-
L111.2	Excavation in rock Class B	m3	4.0		-
L111.3	Ditto- but rock Class C	m3	2.0		-
	CLASS X: MISCELLANEOUS WORKS Final Connection to Inspection Chamber Allow for provisional sum for individual connection to provided inspection chamber. Rate to include all pipes and fittings				
X51		Nr	1.0		-
PAGE TOTAL CARRIED TO Bill 5.2.2 COLLECTION PAGE					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT</u>					
Bill 5.2: SANITATION COMPONENT					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill 5.2.2 Collection Page Total Page 1 Total Page 2				- -
	COST FOR ONE (1) CONSUMER CONNECTION				-
	COST FOR 90 CONNECTIONS	Nr	90		-
Bill 5.2.2 TOTAL CARRIED TO Bill 5.2 COLLECTION					-

<u>NAIROBI WATER AND SANITATION PROJECT</u> <u>Water and Sanitation Works in the Nairobi Informal Settlements KAMOLA SETTLEMENT</u>		
Bill 5.2: SANITATION COMPONENT		
<u>BILL 5.2.- COLLECTION PAGE</u>		
ITEM	DESCRIPTION	AMOUNT (KShs)
	Bill 5.2 COLLECTION PAGE	
	TOTAL Bill 5.2.1 - SEWERS	-
	TOTAL Bill 5.2.2 - CUSTOMER CONNECTIONS (TYPE A)	-
Bill 5.2 TOTAL CARRIED TO Bill 5 SUMMARY PAGE		-

NAIROBI WATER AND SANITATION PROJECT		
Water and Sanitation Works in the Nairobi Informal Settlements		
Kamola Settlement		
Bill Summary		
BILL	ITEM DESCRIPTION	AMOUNT, KSHS.
Bill 5.1	Water Component	-
Bill 5.2	Sanitation Component	-
BILL 5.0 TOTAL CARRIED TO BILL GRAND SUMMARY PAGE		-
SIGNATURE OF BIDDER:		
NAME OF AUTHORIZED REPRESENTATIVE:		
COMPANY STAMP:		
DATE:		

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements KIAMBIU SETTLEMENT					
Bill 6.1: - WATER COMPONENT					
Bill 6.1.1 - WATER PIPELINES					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	These works are to be carried out along narrow wayleaves where there may be some existing active services (electrical, water, e.t.c). This should be considered in the Contractor's rates. The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of sites for structures, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions,Traffic regulation; establishment, operation and removal for works				
	CLASS A: GENERAL ITEM				
A25	<u>Testing of works</u>				
A25.11	Pressure testing and commissioning for the pipeline, including all necessary equipment, materials and labour for the works e.g. delivery of water for testing, fittings, disposal of used water. Pipe diameter 50 - 150 mm	m	3,321		-
A25.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified. Pipe diameter 50 - 150 mm	m	3,321		-
	CLASS D: DEMOLITION AND SITE CLEARANCE				
D1	General clearance 3m wide corridor along the pipeline. Including bushes, shrubs and small trees not exceeding 300mm girth and grubbing up roots	m	3,321.00		-
D3	Removal of Stumps (Provisional) Grub up stumps and roots and cart away to approved tips				-
D3.1	Girth: 0.5 m - 1.0 m	nr	1		-
D3.2	Girth: 1.0 m - 2 m	nr	1		-
	Note:- Girth shall be measured 0.5 m above ground level				-
	CLASS I: PIPE WORK - PIPES				
	<u>Provide and Lay</u>				
	Rate to include Purchase, transportation, laying, jointing, excavation in normal material depth n.e. 2.0 m, preparation of surfaces, disposal of excavated material, shoring sides of excavation, dewatering and backfilling with suitable selected excavated material, to Specifications.The quoted rates shall allow for Setting Out of the Works in accordance with the Specifications. This shall include staking out of the all Pipeline Routes, setting permanent benchmarks etc, and allow for preparation and submission of Construction Drawings and Setting out Report to the Engineer for approval. Include Traffic Diversions,Traffic regulation; establishment, operation and removal for works				
	HDPE PN 16				
I712.2	OD 32mm	m	422		-
I712.1	OD 40mm	m	696		-
I712.0	OD 50mm	m	461		-
I712.1	OD 63mm	m	103		-
I712.2	OD 90mm	m	500		-
I712.3	OD 110mm	m	1,200		-
	Galvanised Iron (Class B)				
I712.1	DN 50mm	m	0		-
I712.2	DN 75mm	m	100		-
I712.3	DN 100mm	m	222		-
PAGE TOTAL CARRIED TO Bill 6.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>					
Bill 6.1: - WATER COMPONENT					
Bill 6.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>CLASS J: PIPE WORK - FITTINGS AND VALVES</u> <u>(Provisional)</u> <i>Provide and Install (Rate to include supply of jointing materials, Stainless steel bolts, nuts, gaskets etc as applicable)</i> <u>HDPE PN16 Bends</u>				
	OD 110 mm				
J611.3	45°	Nr	1		-
J611.4	90°	Nr	3		-
	OD 90 mm				
J611.5	45°	Nr	1		-
J611.6	90°	Nr	5		-
	OD 63 mm				
J611.7	45°	Nr	2		-
J611.8	90°	Nr	5		-
	<u>GI Bends (Class B, Threaded)</u>				
	DN 150 mm				
J311.1	45°	Nr	1		-
J311.2	90°	Nr	1		-
	DN 100 mm				
J311.3	45°	Nr	1		-
J311.4	90°	Nr	1		-
	DN 75 mm				
J311.5	45°	Nr	4		-
J311.6	90°	Nr	2		-
	DN 50 mm				
J311.7	45°	Nr	6		-
J311.8	90°	Nr	8		-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements KIAMBIU SETTLEMENT					
Bill 6.1: - WATER COMPONENT					
	Junctions				
J621.4	OD 110mm x OD 110mm HDPE Tee	Nr	2		-
J621.5	OD 110mm x OD 63mm HDPE Tee	Nr	1		-
J621.6	OD 90mm x OD 63mm HDPE Tee	Nr	1		-
J621.7	OD 63mm x OD 63mm HDPE Tee	Nr	8		-
J621.8	OD 90mm x OD 50mm HDPE Tee	Nr	6		-
J621.9	OD 90mm x OD 40mm HDPE Tee	Nr	11		-
J621.10	OD 90mm x OD 32mm HDPE Tee	Nr	7		-
	Valves				
	Supply, handle, deliver to site, fix in place and test inclusive of all fittings as in the Standard drawings . Valves to BS 5163 and EN 1074 Standards.				
	Rate for valves shall also include for all necessary fittings (Tees, Spigot pipes etc) as per drawings				
	Line Gate Valves (Flange)				
J911.4	DN 150 mm	Nr	1		-
J911.3	DN 100 mm	Nr	2		-
	Air-Valves				
	<i>Air Valves shall be Anti shock combination air valves, with a built in anti-water hammer non slam surge prevention system.To include an isolation valve.of DN 50 mm</i>				
J861.1	PN 16 DN 50 mm	nr	2		-
	Washout valves				
	<i>Gate valve for washout to be supplied with an extension spindle n.e. 2m and a Tee Key. Rate to include invert tee and extension pipe to drain</i>				
J911.1	DN 50 Washout Valve on OD 160mm pipe	nr	1		-
J911.2	DN 50 Washout Valve on OD 110mm pipe	nr	1		-
PAGE TOTAL CARRIED TO Bill 6.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>					
Bill 6.1: - WATER COMPONENT					
Bill 6.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>Water Meters</u>				
	MultiJet bulk cold water meters. Water meters to be as specified in Clause 404.10 of the specifications				
J911.2	DN 100mm	nr	2		-
J911.3	DN 150mm	nr	1		-
	<u>Hydrant</u>				
	Providing & fixing single headed stand post type external yard hydrant comprising of 100mm dia gun metal female instantaneous single outlet, bend complete with all specials and accessories as required as per IS:908-1975. Rate to include Tee and associated fittings				
J911.1	DN 100 mm	nr	1		-
	<u>ANCILLARY WORKS</u>				
	Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings.				
	<u>Note:-</u> Items for work in this class shall include:- - Excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, masonry blocks, reinforcement, formwork, joints and finishes. - Tips for disposal of excavated material or debris to be identified by the Contractor in liaison with the Local Authority.				
	<u>In Situ Chambers</u>				
	Provide all materials and construct Valve chamber internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing				
K112.1	Depth: not exceeding 2.0 m	nr	2		-
PAGE TOTAL CARRIED TO Bill 6.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>					
Bill 6.1: - WATER COMPONENT					
Bill 6.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<u>Road Crossings</u> <i>Extra-overs for normal pipe laying for road crossing works: to include breaking up and permanent reinstatement of roads and provision of a sleeve as per standard drawings</i>				
K731.2	Pipe bore: n.e. 150 mm on gravel road	m	3		-
	<u>Marker Posts</u> <i>Provide and install RC standard marker posts for:</i>				
K82.1	Air Valves inscribed AV	nr	2		-
K82.2	Washouts, inscribed WO	nr	1		-
K82.3	Sluice Valves, inscribed SV	nr	28		-
K82.4	Along Pipeline at 300 m spacing and at change of directions, , inscribed "MAJI" and Diameter of the Pipeline	nr	4		-
	<u>CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u> <i>Extras over excavation and backfilling for excavation in Rock. Rate to include carting away and disposal. In pipe trench and chambers (Provisional).</i>				
L111.1	Excavation in trench for rock class "A"	m ³	20		-
L111.2	Excavation in trench for rock class "B"	m ³	10		-
L111.3	Excavation in trench for rock class "C"	m ³	100		-
	<u>Note</u> - Blasting is NOT permitted for Item L11				
PAGE TOTAL CARRIED TO Bill 6.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>					
Bill 6.1: - WATER COMPONENT					
Bill 6.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
L54	Reinforced Concrete Surround (Provisional)				-
L551	150mm thick reinforced Concrete Surround Class 15/20 to pipe as per Standard Drawings at locations directed by the Engineer. Rate to include for formwork, supports, vibrating, etc.	m	1		-
X51	<p>CLASS X:- MISCELLANEOUS</p> <p>Supply and install with item decypted before, tracable warning tape, permanently imprinted with= "CAUTION WATER PIPE", color= blue, width= 50mm, thickness= 5mm.</p>	m	3,350		-
PAGE TOTAL CARRIED TO Bill 6.1.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>					
Bill 6.1: - WATER COMPONENT					
Bill 6.1.1 - WATER PIPELINES					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill 6.1.1 COLLECTION PAGE				
1	From page 1				-
2	From page 2				-
3	From page 3				-
4	From page 4				-
5	From page 5				-
Bill 6.1.1 TOTAL CARRIED TO Bill 6.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>					
Bill 6.1: - WATER COMPONENT					
Bill 6.1.2 - PREPAID WATER DISPENSERS					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	<i>Works to be undertaken as directed by the Engineer</i>				
	Installation of PPDS				
X92.1	Excavate for, provide all materials and construct prepaid water dispenser chamber in accordance with the tender drawings & specifications	nr	29		-
X92.3	Supply, install, test and commission prepaid meter dispenser and with 2 draw-off taps. Rate to include for provision of wiring and pipework comprising of 2 valves, meter and tees all of 1/2" diameter, in accordance with the Tender drawings & Specifications	nr	29		-
X92.2	Allow for rehabilitation works on the existing 3 No. water kiosks. (Installation of new ATM machines and laying of pipes that have been vandalized)	Item	4.00		-
V3	Allow a PC sum for branding and paintworks on the prepaid dispenser with the client's and financier's logos, as well as the project name, type of facility and any other requisite branding. The colours used should be as directed by the engineer.	PC			
Bill 6.1.2 TOTAL CARRIED TO BILL 3.1 COLLECTION PAGE					-
Bill 6.1.2 - PREPAID WATER DISPENSERS					
	Bill 6.1.2 Collection Page				
	Page 1 Total				-
	Bill 6.1.2 TOTAL CARRIED TO Bill 6.1 COLLECTION PAGE				-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>					
Bill 6.1: - WATER COMPONENT					
BILL 11.1.5 - SOLAR SYSTEM WORKS					
ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	Unit Rate Exclusive of VAT (Kshs)	Total Amount exclusive of VAT (Kshs)
	Solar System <i>Rate to include Supply of materials, Installation, testing and commissioning of Solar Power System in accordance with Shop drawings from an approved Supplier. The drawings shall be approved by the Resident Engineer before commencement of works</i>				
X92.1	Install and commission a PV hybrid solar system to power a 22kW rated Submersible pump motor approved by Engineer. The rate to include all necessary accessories including: PV Panels (allow a safety factor of 40% for losses) Controllers DOL DC Breaker Combiner box PV Disconnect switch Inverter Electrical cables (6mm/3core) Electrical Sundries including;; cable glands, cables lags, cable ties, and any other necessary materials Lightning Protector system	LS	1		-
X92.2	Steel rack for mounting the solar panels. The structure shall be 6m high and mounted on ground. To be fabricated as per design/ shop drawings approved by the Resident Engineer	LS	1		-
	Fence and Gate <i>Rate to include supply of materials, delivery and installation.</i>				
X136	Fence made of Concrete posts and 12.5 Heavy gauge Chainlink complete with 12.5 Gauge x 6 strand galvanized barbed wired fencing as per Standard Drawings	m	200.00		-
X234	Metal field double leaf gate as per Standard Drawings	nr	1.00		-
PAGE TOTAL CARRIED TO Bill 6.1.5 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>					
Bill 6.1: - WATER COMPONENT					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill 6.1.5 TOTAL TO COLLECTION PAGE				
	PAGE 1 TOTAL				-
	TOTAL FOR 1 No. HYBRID SOLAR SYSTEM				-
	TOTAL FOR 1 No. HYBRID SOLAR SYSTEMS	nr	1.00	-	-
Bill 6.1.5 TOTAL CARRIED TO Bill 6.1 COLLECTION PAGE					-

NAIROBI WATER AND SANITATION PROJECT					
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>					
Bill 6.1: - WATER COMPONENT					
Bill 6.1.6- WATER CONSUMER CONNECTIONS					
ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY	Unit Rate Exclusive of VAT (Kshs)	Total Amount exclusive of VAT (Kshs)
	Bill 6.1.6- WATER CONSUMER CONNECTIONS				
	<u>Last Mile Water connections are limited by the</u> <u>connections identified by the employer</u> Typical 1 connection				
CLASS I	PIPEWORK- PIPES				
I14*	Provide, lay and joint HDPE PN16 pipes, PE 100. Rate to include excavation and backfilling of trenches, depth not exceeding 1.5 m. Include for preparation of trench surfaces; upholding sides of the excavation, disposal of excess excavated material, removal of dead services except to the extent that such work is included in classes J, K and L				
	Nominal bore 13mm inclusive of valve sockets	m	6	300	1,800.00
	PIPEWORK- FITTINGS AND VALVES				
CLASS J	Provision and installation of fittings and valves	Nr			-
	Junctions and branches - Tees or Saddles DN				-
	150 x 50 threaded branch	Nr			-
321.1	Double collars/ Couplings		1		-
	For GI pipe nominal bore (37mm to 200mm)	Nr			-
J341 J411	Bends/ elbows		2		-
	Nominal bore 13mm				- 1,500.00
	Gate valves to BS 5163, PN 16, flanged to BS 4772	Nr	5		-
J811.1	Nominal bore 13mm	Nr			-
J811.2	Stop cork tap nominal bore 13mm	Nr	2		-
J811.3	Water meter DN 13 mm		1		-
	CLASS K : PIPEWORK- MANHOLES AND PIPEWORK		1		-
	ANCILLARIES	Nr			
K671	Allow for sewer/ drain crossings	Nr			-
K678	Allow for underground telephone and power services crossings	M	1		-
K731	Allow for breaking, and temporary and permanent reinstatement of murrum roads	m	3		-
K741	Allow for breaking up, temporary and permanent reinstatement of murrum foot paths	m	3		-
K810	Allow for reinstatement of drains	Nr			-
K861	Allow for connection to mains	Nr	1		-
K861	Allow for installation of prefabricated Meter box		1		-
	CLASS L: PIPEWORK- SUPPORTS AND		1		-
	PROTECTION, ANCILLARIES TO LAYING AND				
L11	Excavation in rock various classes (0.045m3/m)	m3	0.25		-
	Total a Typical Water Connection				
	Total Amount for ALL Connections Proposed		100	-	-
Bill 6.1.7 TOTAL CARRIED TO Bill 6.1 SUMMARY PAGE					

NAIROBI WATER AND SANITATION PROJECT		
Water and Sanitation Works in the Nairobi Informal Settlements <u>KIAMBIU SETTLEMENT</u>		
Bill 6.1: - WATER COMPONENT		
ITEM	DESCRIPTION	AMOUNT (KShs)
	Bill 6.1 COLLECTION PAGE	
	TOTAL Bill 6.1.1 - WATERLINES	-
	TOTAL Bill 6.1.2 - PREPAID WATER DISPENSER	-
	TOTAL Bill 6.1.5 - HYBRID SOLAR SYSTEM	-
	TOTAL Bill 6.1.6 - CONSUMER CONNECTIONS	-
Bill 6.1 TOTAL CARRIED TO Bill 6 SUMMARY PAGE		-

NAIROBI WATER AND SANITATION PROJECT		
Water and Sanitation Works in the Nairobi Informal Settlements		
KIAMBIU SETTLEMENT		
Bill Summary		
BILL	ITEM DESCRIPTION	AMOUNT, KSHS.
Bill 6.1	Water Component	-
BILL 6.0 TOTAL CARRIED TO BILL GRAND SUMMARY PAGE		-
SIGNATURE OF BIDDER:		
NAME OF AUTHORIZED REPRESENTATIVE:		
COMPANY STAMP:		
DATE:		

NAIROBI WATER AND SANITATION PROJECT					
BILL 7 - DAYWORKS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	TOTAL (Kshs.)
	<p>Note: This Bill is Provisional</p> <p>The rates entered in the following schedule shall be used in assessing the cost of any extra work ordered by the Engineer for execution on a Dayworks basis. The rates indicated are to be net in relation to the provision of labour, materials or plant indicated. Market rates shall be used if any rate is found to be grossly inconsistent with the market rate.</p> <p>Rates are assumed to be inclusive of Profits and overheads</p>				
1	Labour				
1.1	Unskilled labourer	h	400		-
1.2	Foreman	h	200		-
1.3	Assistant foreman	h	200		-
1.4	Plant operator	h	50		-
1.5	Certified Blaster	h	50		-
1.6	Mason	h	200		-
1.7	Concretor	h	100		-
1.8	Carpenter	h	50		-
1.9	Plumber	h	50		-
1.10	Pipelayer	h	150		-
1.11	Electrician	h	200		-
1.12	Surveyor	h	100		-
1.13	Painter	h	50		-
1.14	Technician	h	200		-
1.15	Watchman	h	400		-
Total Carried to Bill 12 collection page					-

NAIROBI WATER AND SANITATION PROJECT					
BILL 7 - DAYWORKS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	TOTAL (Kshs.)
2	Materials All materials as per specifications. The rate to include for delivery to site, storage and handling, all overheads and profits				
2.1	Coarse aggregates for concrete	m ³	50		-
2.2	Fine aggregates (sand) for concrete	m ³	50		-
2.3	Ordinary portland cement	t	5		-
2.4	Building stone/concrete blocks	m	60		-
2.5	Hardcore	m ³	50		-
2.6	Murram	m ³	25		-
2.7	Spigot and socket GRP pipes 450mm dia.	m	20		-
2.8	DN 600 mm PCC Sewer pipe	m	50		-
2.9	DN 525 mm PCC Sewer pipe	m	50		-
2.1	DN 450 mm PCC Sewer pipe	m	50		-
2.11	DN 300 mm PCC Sewer pipe	m	50		-
2.12	BRC mesh A142	m ²	25		-
2.13	BRC mesh A252	m ²	25		-
2.14	High yield twisted steel bars	t	1		-
2.15	Concrete Class 15/20	m ³	10		-
2.16	Concrete Class 20/20	m ³	10		-
2.17	Concrete Class 25/20	m ³	10		-
2.18	Petrol	L	500		-
2.19	Diesel	L	500		-
2.2	Lubricants	L	200		-
2.21	Epoxy Paint	m2	50		-
Total Carried to Bill 12 collection page					-

NAIROBI WATER AND SANITATION PROJECT					
BILL 7 - DAYWORKS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	TOTAL (Kshs.)
2.22	Emulsion Paint	m2	50		-
2.23	Gloss Paint	m2	50		-
2.24	Wrought Finish Formwork	m ²	100		-
2.25	Smooth Finish Formwork	m ²	100		-
2.26	DN 600mm steel pies epoxy coated and epoxy lined	m	10		-
2.27	DN 450mm steel pies epoxy coated and epoxy lined	m	10		-
2.28	DN 300mm steel pies epoxy coated and epoxy lined	m	10		-
2.28	Fibre reinforced plastic Manhole covers 20 N/mm2	Nr	30		-
2.9	Fibre reinforced plastic Manhole covers 40 N/mm2	Nr	25		-
Total Carried to Bill 12 collection page					-

NAIROBI WATER AND SANITATION PROJECT					
BILL 7 - DAYWORKS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	TOTAL (Kshs.)
3	Plant Rate to include for all operation and maintenance costs, fuel, oil, grease, operators etc.				
3.1	1 tonne pickup	h	80		-
3.2	7 tonne lorry (tipper)	h	50		-
3.3	15 tonne lorry (tipper)	h	50		-
3.4	20 tonne lorry (tipper)	h	50		-
3.5	D7 bulldozer	h	20		-
3.6	Hydraulic excavator/shovel (1.0m ³)	h	20		-
3.7	Wheeled Hydraulic excavator/shovel (0.5m ³)	h	20		-
3.8	Backhoe tractor (1.0m ³)	h	20		-
3.9	Wheel loader	h	20		-
3.1	Mobile crane (5tonne)	h	20		-
3.11	Concrete mixer 1.0m ³	h	50		-
3.12	Dumper, 0.76m ³	h	25		-
3.13	Dumper, 2.0m ³	h	50		-
3.14	Concrete vibrator (petrol or diesel) with drive, flex and 40mm poker	h	50		-
3.15	Water bowser (5,000 l)	h	25		-
3.16	Portable dewatering pump	h	50		-
3.17	Air compressor machine (5000 l/min)	h	80		-
3.18	Jack hammer (25kg)	h	100		-
3.19	Generator	h	50		-
3.20	Electric welding set including electrodes	h	50		-
3.21	Cutting and welding set including oxygen and acetylene	h	50		-
Total Carried to Bill 12 collection page					-

NAIROBI WATER AND SANITATION PROJECT					
BILL 7 - DAYWORKS					
	<u>Bill 12 Collection Sheet</u>				
	Page No. 1				-
	Page No. 2				-
	Page No. 3				-
	Page No. 4				-
BILL 12 TOTAL CARRIED FORWARD TO GRAND SUMMARY SHEET					-

Environmental, Social, Health and Safety (ESHS) Cost Schedule

[This Cost Schedule should be carried forward into the Bill of Quantities under the Bill "General Items".]

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT [specify currency]	VAT Amount
ESHS 1	Resources allocated to ESHS management	Clause 4	Lump sum		
ESHS 2	Drafting and updating the ESHS documentation, reporting, inspections	Clauses 1, 2, 3, 5, 6, 7, 9	Lump sum	[Cost ESHS 1 should exclude all or part of the costs of those tasks]	
ESHS 3	Implementation of the Health and Safety Plan: Meetings, health care centre, medical check-ups, emergencies and evacuations, safety protective equipment, hygiene	Clauses 1, 9, 21 to 25, 27 to 35, 37, 38	Lump sum	[Cost ESHS 1 should exclude all or part of the costs of those tasks]	
ESHS 4	Accommodation, drinking water, meals and transportation of staff (*) (*): The Bidder shall detail the financial conditions of the supply of accommodation, meals and transport to its staff: <ul style="list-style-type: none">– Accommodation– Meals– Transport	Clauses 36, 40, 41		[The cost for "Site mobilization" should exclude all or part of the costs of those tasks]	
			Lump sum		
			Lump sum		
			Lump sum		
ESHS 5	Training and local recruitment management costs	Clauses 8, 39	Lump sum	[Cost ESHS 1 should exclude all or part of the costs associated to those tasks]	
ESHS 6	Protection of adjacent areas, biodiversity, prevention of erosion and wastewater management	Clauses 10, 11, 12, 17, 18	Lump sum		
ESHS 7	Traffic, noise and atmospheric emissions management, land take	Clauses 13, 14, 42, 43, 44	Lump sum		
ESHS 8	Waste and hazardous products management	Clauses 15, 26	Lump sum		
ESHS 9	Vegetation clearing and Site rehabilitation	Clauses 16, 19, 20	Lump sum	[The cost for "Site mobilization" should exclude all or part of the costs associated to those tasks]	
Total for Bill ESHS				_____	_____
<p>ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications).</p> <p>Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.</p>					

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT <i>[specify currency]</i>	VAT Amount
If the ESHS specifications are not included in the Bidding Documents, this ESHS Cost Schedule is not applicable.					

Security Cost Schedule

[This Cost Schedule should be carried forward into the Bill of Quantities under the Bill "General Items".]

Price N°	Category Title	Reference of Security Specifications	Unit Price (currency)	VAT
Security Item				
Security 1	Security organisation	Article 4.1		
Security 2	Travel within the country and to the relevant area	Article 4.2		
Security 3	Accommodation during assignments	Article 4.3		
Security 4	Accommodation and security on project sites and worksites	Article 4.4		
Security 5	Communication	Article 4.5		
Other	This price may remunerate all the other services described in Articles 1 to 3 of the Security Specifications.	Articles 1 to 3, 5 to 6		
TOTAL Security Item			_____	_____
<p>The prices include all activities and measures defined in the security specifications and correspond to additional costs compared to an environment without security risk.</p> <p>A breakdown of security price items shall be included in the Bid.</p> <p>If security specifications are not included in the Bidding Documents, this Security Cost Schedule is not applicable.</p>				

Technical Proposal

The Employer will specify, for each section of the technical proposal as listed below, the information and details that the Bidder must provide in its Bid.

- a) Alternative Technical Solutions
- b) Environmental, Social, Health and Safety (ESHS) Methodology
- c) List of Subcontractors
- d) Site Organisation and Method Statement
- e) Construction Schedule
- f) Personnel proposed (forms PER-1 and PER-2)
- g) Equipment proposed (form EQU)

Alternative Technical Solutions**Proposal for the Parts of the Works for which
Alternative Technical Solutions are permitted**

Item	Description of the Requirement	Description of the Proposed Alternative Technical Solution¹	Benefits to the Employer

¹ The Description of the proposed Alternative Technical Solution should be complete and should include as an attachment any documentation necessary for evaluation as indicated in ITB 13.3.

Environmental, Social, Health and Safety (ESHS) Methodology

The Bidder shall provide an ESHS Methodology providing information on how the Bidder shall meet the requirements and objectives specified in Section VII - Works Requirements - ESHS Specifications. **If the ESHS Specifications are not included in the Bidding Documents, this requirement is not applicable.**

The ESHS Methodology submitted shall be in the form of a preliminary draft of the Worksite Environmental and Social Management Plan (Worksite - ESMP), the content of which is detailed in Appendix 1 to ESHS Specifications.

In order to address the highly sensitive ESHS issues highlighted during the project's environmental and social impact assessment, **the ESHS Methodology shall provide detailed information on the management of the items listed in the table of paragraph 1. "Essential ESHS issues of worksite management" in Section VII – Works Requirements.** The purpose is not for the Bidder to provide one more time policies and internal procedures which were requested in the Prequalification phase but to provide a concrete ESHS methodology adapted to the worksites environment.

A Bid for which the ESHS Methodology is evaluated as non-substantially responsive (i.e. with material deviation, reservation or omission) to the ESHS Specifications shall be rejected.

List of Subcontractors (If any)**Proposed Subcontractors for Key Activities/Sub-Activities**

The following subcontractors and/or manufacturers are proposed for carrying out the key activity/sub-activity indicated.

Key Activity/Sub-Activity	Proposed Subcontractors	Nationality

Bidders shall submit an undertaking from each proposed subcontractor to confirm that they have read, understand and will comply with the ESHS obligations using the form hereby attached.

Form of Subcontractor ESHS Undertaking ((if applicable))

Date: _____

Bid No.: AWWDA/AFD/NWSP/W-04B/2023

Contract title: ***Construction Works For Water and Sanitation in the Informal Settlements in Nairobi Project – Lot 2 - Eastern Nairobi Works***

To: The Chief Executive Officer
Athi Water Works Development Agency
Athi Water Plaza, Muthaiga North Road, Off Kiambu Road
P.O Box 45283 – 00100 Nairobi, Kenya

We, the undersigned, confirm that we have read, understand and will comply with the ESHS Specifications for the above-mentioned contract.

Name of the proposed subcontractor: _____

Name and title of the person signing this undertaking on behalf of the subcontractor: _____

*[Signature of the person named above]*_____
[Date signed]

Name of the person duly authorized to sign the Bid on behalf of the Bidder: _____

Title of the person signing the Bid: _____

Signature of the person named above: _____

Date signed (day/month/year): _____

Site Organisation and Method Statement

Each Bidder shall set out details of the Site Organization and Method Statement for the Works to demonstrate how it will meet the Employer's objective and requirements. As a minimum, the Method Statement shall address the following:

- a) Details of the arrangements and methods which the Bidder proposes to implement for the construction of the Works, in sufficient detail to demonstrate their adequacy to achieve the requirements of the Contract including completion within the Time for Completion stated in the Particular Conditions of Contract;
- b) Outline of the arrangements of the Bidder to manage coordination of Site access;
- c) Comments on the geotechnical and subsurface aspects of the Works including materials, material sources and any constraints;
- d) Comments on logistics and traffic management
- e) Outline of the arrangements and organisation of the Bidder to ensure compliance with the Works Requirements;
- f) Outline of the arrangements of the Bidder to carry out testing upon completion as specified in the Works Requirements;
- g) When alternative technical solutions are permitted for the parts of the Works specified in Section VII - Works Requirements, a full description, including all documentation necessary for the evaluation, as listed in ITB 13.3, will be provided.
- h) *[Insert other information, as may be appropriate].*

Construction Schedule

Each Bidder shall set out a detailed Program and Schedule for mobilisation and construction of the Works to be performed, including estimated starting and finishing dates for individual components and identification of major milestones and critical path. The proposed Program and Schedule shall be developed according to Works Requirements and shall address the following:

- a) Details of the proposed schedule for obtaining permits that may be necessary in order to commence the Works, including the preparation of required studies, supporting information, and applications;
- b) Details of the proposed timeline for carrying out the Works within the Time for Completion, in the form of a bar chart showing notably the critical path;
- c) Details of the proposed timeline for the testing, commissioning and handing over of the completed Works;
- d) *[Other proposed measures as may be appropriate].*

Personnel

Form PER-1: Proposed Personnel

Bidders should provide the names of suitably qualified personnel to meet the specified requirements stated in Section III, Evaluation and Qualification Criteria. The data on their experience should be supplied using the Form below for each candidate.

1.	Title of position (*)
	Name
2.	Title of position (*)
	Name
3.	Title of position (*)
	Name
4.	Title of position (*)
	Name

(*): As listed in Section III, Evaluation and Qualification Criteria.

Form PER-2: Resume of Proposed Personnel

Name of Bidder: _____

Position: _____

Personnel information	Name: _____	Date of birth: _____
	Professional qualifications: _____ _____	
Present employment	Name of employer: _____	
	Address of employer: _____ _____	
	Telephone: _____	Contact (manager / personnel officer): _____
	Fax: _____	Email: _____
	Job title: _____ _____	Years with present employer: _____

Summarize professional experience over the last 20 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company / Project / Position / Relevant technical and management experience

Form EQU: Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder.

Item of equipment		
Equipment information	Name of manufacturer: _____ _____	Model and power rating: _____ _____
	Capacity: _____ _____	Year of manufacture: _____ _____
Current status	Current location: _____ _____	
	Details of current commitments: _____ _____ _____	
Source	Indicate source of the equipment: <input type="checkbox"/> Owned <input type="checkbox"/> Leased <input type="checkbox"/> Rented <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Bidder.

Owner	Name of owner: _____	
	Address of owner: _____ _____ _____	
	Telephone: _____	Contact name and title: _____ _____
	Fax: _____	Email: _____
Agreements	Details of rental / lease / manufacture agreements specific to the project: _____ _____ _____ _____	

Schedule of Suppliers / Manufacturers for Key Materials / Equipment

No.	Material / Equipment	Name and Address of Supplier (Where applicable)	Country of Origin	Name and Address of Manufacturer (Where applicable)	Make / Model (Where Applicable)	Applicable Quality Standard to which Material / Equipment Conforms
1	HDPE pipes and fittings					
2	Ferrous pipes and fittings					
3	Mechanical flow meters					
4	Air valves					
5	Fire hydrants					
6	Gate valves					
7	Reinforcement steel					
8	Cement					
9	Consumer Meters					

Note: Bidder to submit Technical Data Sheets from the proposed manufacturers for each of the items above.
If the Bidder fails to provide adequate details as required above, the Bid may be deemed incomplete and consequently rejected

Bidders Qualification Forms

To establish its qualifications to perform the contract in accordance with Section III, Evaluation and Qualification Criteria, the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

**Form ELI-1.1:
Bidder Information Form**

Date: _____

Tender No. and title: *AWWDA/AFD/NWSP/W-04B/2023,
Construction Works For water and sanitation in the Informal Settlements in Nairobi project – Lot 2 Eastern
Nairobi Works*

Page _____ of _____ pages

Bidder's name: _____ <i>[insert full name]</i>
In case of Joint Venture (JV), name of each member: _____ <i>[insert full name of each member in JV]</i>
In case of a JV, Bidder's actual or intended country of constitution: _____ <i>[indicate country of constitution]</i>
Bidder's actual or intended year of constitution: _____ <i>[indicate year of constitution]</i>
Bidder's legal address (in country of constitution): _____ <i>[insert street / number / town or city / country]</i>
Bidder's authorized representative information: Name: _____ <i>[insert full name]</i> Address: _____ <i>[insert street / number / town or city / country]</i> Telephone/Fax numbers: _____ <i>[insert telephone/fax numbers, including country and city codes]</i> Email address: _____ <i>[indicate email address]</i>
1. Attached are copies of original documents of: <ul style="list-style-type: none"> <input type="checkbox"/> Articles of Constitution (or equivalent documents of association) of the legal entity named above; <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1; <input type="checkbox"/> In case of State-owned enterprise or institution, in accordance with ITB 4.3, documents establishing: <ul style="list-style-type: none"> • Legal and financial autonomy; • Operation under commercial law; • Establishing that the Bidder is not a dependent agency of the Employer.
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

**Form ELI-1.2:
Bidder's JV Information Form**

[The following table shall be filled by each member of a Joint Venture and, if applicable, by any specialized subcontractor, and in that case substitute "Bidder's JV member" for "specialized subcontractor".]

Date: _____

Tender No. and title: **AWWDA/AFD/NWSP/W-04B/2023,
Construction Works For water and sanitation in the Informal Settlements in Nairobi project – Lot 2 Eastern
Nairobi Works**

Bidder's JV name: _____ <i>[insert full name]</i>
Bidder's JV member's name: _____ <i>[insert full name Bidder's JV Member]</i>
Bidder's JV member's country of constitution: _____ <i>[indicate country of constitution]</i>
Bidder's JV member's year of constitution: _____ <i>[indicate year of constitution]</i>
Bidder's JV member's legal address (in country of constitution): _____ <i>[insert street / number / town or city / country]</i>
Bidder's JV member's authorized representative information: Name: _____ <i>[insert full name]</i> Address: _____ <i>[insert street / number / town or city / country]</i> Telephone/Fax numbers: _____ <i>[insert telephone/fax numbers, including country and city codes]</i> Email address: _____ <i>[indicate email address]</i>
1. Attached are copies of original documents of: <div style="margin-left: 20px;"> <input type="checkbox"/> Articles of Constitution (or equivalent documents of association) of the legal entity named above; <input type="checkbox"/> In case of State-owned enterprise or institution, in accordance with ITB 4.3, documents establishing: <ul style="list-style-type: none"> • Legal and financial autonomy; • Operation under commercial law; • Establishing that the Bidder is not a dependent agency of the Employer. </div>
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Form CON-2:
Historical Contract Non-Performance, Pending Litigation and Litigation History

[The following table shall be filled in for the Bidder and for each member of a Joint Venture]

Bidder's Name: *[insert full name]*

Date: _____

JV Member's Name _____

IPC No. and title: **AWWDA/AFD/NWSP/W-04B/2023,**

Construction Works For water and sanitation in the Informal Settlements in Nairobi project – Lot 2 Eastern Nairobi Works

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Non-Performed Contracts in accordance with Section III - Evaluation and Qualification Criteria			
<input type="checkbox"/> Contract non-performance did not occur since 1 st January <i>[insert current year number less 5]</i> specified in Section III, Evaluation and Qualification Criteria, criterion 2.1.			
<input type="checkbox"/> Contract(s) not performed since 1 st January <i>[insert current year number less 5]</i> specified in Section III, Evaluation and Qualification Criteria, criterion 2.1, as indicated below:			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street / number / city of town / country]</i> Reason(s) for non-performance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>

Pending Litigation, in accordance with Section III - Evaluation and Qualification Criteria			
<input type="checkbox"/> No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, criterion 2.3 <input type="checkbox"/> Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, criterion 2.3, as indicated below:			
Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)
[insert year]	[insert amount]	Contract Identification: [Indicate complete contract name, number, and any other identification] Name of Employer: [Insert full name] Address of Employer: [Insert street / number / city of town / country] Matter in dispute: [Indicate main issues in dispute] Party who initiated the dispute: [Indicate "Employer" or "Contractor"] Status of dispute: [Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]	[insert amount]
[insert year]	[insert amount]	...	[insert amount]
...

Form FIN – 3.1: Financial Situation and Performance

[The following table shall be filled in for the Bidder and for each member of a Joint Venture.]

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

JV Member's Name: *[insert full name]*

IPC No. and title: AWWDA/AFD/NWSP/W-04B/2023,

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1. Financial data

Type of Financial information in <i>[indicate currency]</i>	Historic information for previous <i>[insert number, in figure and in word] years</i> (amount in currency, currency exchange rate: US\$ equivalent)		
	Year 1	Year 2	Year 3
Statement of financial position (information from balance sheet)			
Total assets (TA)			
Total financial liabilities ¹			
Total equity/Net worth (NW)			
Current assets			
Current liabilities			
Working capital (WC)			
Information from income statement			
Total revenue			
Earnings before interest, taxes, depreciation, and amortization (EBITDA) ²			
Earnings before taxes (EBT)			

¹ Means any financial indebtedness for and in respect of:

- a) any monies borrowed on a short, medium or long-term basis;
- b) any bank overdraft;
- c) any amounts raised pursuant to any bills of exchange issued to a third party (or any dematerialised equivalent of such instrument);
- d) any amounts raised pursuant to any note purchase facility or the issue of bonds, notes, debentures, loan stock or any similar instruments;
- e) the amount of any liability in respect of any lease or hire purchase contract which would be treated as a finance or capital lease;
- f) receivables sold or discounted (other than any receivables to the extent they are sold on a non-recourse basis).

² Means, for any given year, the aggregate of:

- (+) net income
- (+) tax expense
- (+/-) extraordinary income or expense
- (+/-) financial result
- (+/-) net foreign exchange losses or gains
- (+) net depreciation and amortization allowances and provisions

Cash flow information			
Cash flow from operating activities			

2. Financial documents

The Bidder and in case of a JV, each member shall provide copies of financial statements for *[insert number]* years pursuant Section III - Evaluation and Qualifications Criteria, criterion 3.1. The financial statements shall:

- a) Reflect the financial situation of the Bidder or in case of a JV, each member, and not an affiliated entity (such as parent company or group member);
 - b) Be independently audited or certified in accordance with local legislation;
 - c) Be complete, including all notes to the financial statements;
 - d) Correspond to accounting periods already completed and audited.
- ☐ Attached are copies of financial statements³ for the *[insert number]* years required above and complying with the requirements

³ If the most recent set of financial statements is for a period earlier than 12 months from the date of bid, the reason for this should be justified.

Form FIN-3.2: Annual Turnover

[The following table shall be filled in for the Bidder and for each member of a Joint Venture]

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

JV Member's Name: *[insert full name]*

IPC No. and title: AWWDA/AFD/NWSP/W-04B/2023,

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Year	Annual turnover data		
	Amount and currency ¹	Exchange rate	US\$ equivalent
<i>[Indicate calendar year]</i>	<i>[insert amount and indicate currency]</i>	<i>[insert exchange rates used to calculate the US\$ equivalent]</i>	<i>[insert US\$ equivalent]</i>
		Average Annual Turnover²	

¹ The indicated turnover amounts must be identical as those appearing on the financial statements.

² See Section III, Evaluation and Qualification Criteria, criterion 3.2.

**Form FIN-3.3:
Financial Resources**

[The following table shall be filled in for the Bidder and all parties combined in case of a Joint Venture]

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Section III - Evaluation and Qualification Criteria.

Financial Resources		
No.	Source of financing	Amount (US\$ equivalent)
1		
2		
3		
...		

Form FIN-3.4:
Current Contract Commitments / Works in Progress

Bidders and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments					
No.	Name of Contract	Employer's Contact Address, Telephone and Fax	Value of Outstanding Work (Current US\$ Equivalent)	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months (US\$/month)
1					
2					
3					
4					
5					
...					

Form EXP-4.1: General Construction Experience

[The following table shall be filled in for the Bidder and in the case of a JV Bidder, each Member]

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

JV Member's Name: *[insert full name]*

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[Identify contracts that demonstrate continuous construction work over the past [number] years pursuant to Section III, Evaluation and Qualification Criteria, criterion 4.1. List contracts chronologically, according to their commencement (starting) dates.]

Starting Year ¹	Ending Year	Contract Identification	Role of Bidder
<i>[Indicate year]</i> _____	<i>[Indicate year]</i> _____	Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Bidder: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in currency, mention currency used, exchange rate and US\$ equivalent]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Prime Contractor" or "JV Member" or "Subcontractor" or "Management Contractor"]</i> _____
...

¹ See Section III, Evaluation and Qualification Criteria, criterion 4.1.

Form EXP-4.2(a):
Specific Construction and Contract Management Experience

[The following table shall be filled in for contracts performed by the Bidder or each member of a Joint Venture]

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

JV Member's Name: *[insert full name]*

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Similar Contract No: <i>[insert number] of [insert number of similar contracts required]</i>	Information		
Contract Identification:	_____		
	<i>[Insert contract name and number, if applicable]</i>		
Award Date:	_____		
	<i>[Insert day, month, year, i.e. 15 June, 2015]</i>		
Completion Date:	_____		
	<i>[Insert day, month, year, i.e. 03 October, 2017]</i>		
Role in Contract: <i>[check the appropriate box]</i>	<input type="checkbox"/> Prime Contractor	<input type="checkbox"/> Member in JV	<input type="checkbox"/> Management Contractor
			<input type="checkbox"/> Subcontractor
Total Contract Amount:	_____		_____
	<i>[Insert total contract amount in local currency]</i>		<i>[Insert Exchange rate and total contract amount in US\$ equivalent]</i>
If member is a JV or subcontractor, specify participation in total Contract amount:	_____ % <i>[Insert a percentage amount]</i>	_____	_____
		<i>[Insert total contract amount in local currency]</i>	<i>[Insert exchange rate and total contract amount in US\$ equivalent]</i>
Employer's Name:	_____		
	<i>[Insert full name]</i>		
Address:	_____		
	<i>[Indicate street / number / town or city / country]</i>		
Telephone/Fax numbers:	_____		
	<i>[Insert telephone / fax numbers, including country and city area codes]</i>		
Email:	_____		
	<i>[Insert email address, if available]</i>		

Form EXP-4.2(a) (cont.):
Specific Construction and Contract Management Experience (cont.)

Bidder's Name: *[insert full name]*
 JV Member's Name: *[insert full name]*

Similar Contract No: <i>[insert number] of [insert number of similar contracts required]</i>	Information
Description of the similarity in accordance with criterion 4.2(a) of Section III - Evaluation and Qualification Criteria:	
1. Amount	_____ <i>[insert amount in local currency, exchange rate, US\$ in words and in figures]</i>
2. Physical size of required works items	_____ <i>[Insert physical size of items]</i>
3. Complexity	_____ <i>[Insert description of complexity]</i>
4. Methods/Technology	_____ <i>[Insert specific aspects of the methods/technology involved in the Contract]</i>
5. Construction rate for key activities	_____ <i>[Insert rates and items]</i>
6. Other Characteristics	_____ <i>[Insert other characteristics, as described in Section VII - Works Requirement – Scope of Works]</i>

Form EXP-4.2(b):
Construction Experience in Key Activities

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

JV Member's Name: *[insert full name]*

Subcontractor's Name¹ (as per ITB 34.2 and 34.4): *[insert full name]*

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1. Key Activity No. 1: *[insert brief description of the activity, emphasizing its specificity]*

	Information		
Contract Identification:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert contract name and number, if applicable]</i>		
Award Date:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert day, month, year, i.e. 15 June, 2015]</i>		
Completion Date:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert day, month, year, i.e. 03 October, 2017]</i>		
Role in Contract: <i>[Check the appropriate box]</i>	<input type="checkbox"/> Prime Contractor	<input type="checkbox"/> Member in JV	<input type="checkbox"/> Management Contractor
Total Contract Amount:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[insert total contract amount in contract currency(ies)]</i>		<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[insert exchange rate and total Contract amount in US\$ equivalent]</i>
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year:	Total quantity in the Contract (i)	Percentage participation (ii)	Actual Quantity Performed (i) x (ii)
Year 1			
Year 2			
Year 3			
Year 4			
Employer's Name:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert full name]</i>		
Address:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Indicate street / number / town or city / country]</i>		
Telephone/Fax numbers:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert telephone/fax numbers, including country and city area codes]</i>		
Email:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert email address, if available]</i>		

¹ If permitted by the Employer under "specialized works" (criterion 4.2(b) in the table of the Qualification Criteria of Section III, Evaluation and Qualification Criteria.

Form EXP-4.2(b) (cont.):
Construction Experience in Key Activities (cont.)

Bidder's Name: *[insert full name]*

Joint Venture Member's Name: *[insert full name]*

Description of the key activities in accordance with criterion 4.2(b) of Section III - Evaluation and Qualification Criteria:	
	<i>[insert response to inquiry indicated in left column]</i>

2. **Key Activity No. 2:** *[insert brief description of the activity, emphasizing its specificity]*
3. **Key Activity No. 2:** *[insert brief description of the activity, emphasizing its specificity]*

Form CER:
Quality Management / Environmental, Social, Health and Safety (ESHS) Certification

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

JV Member's Name: *[insert full name]*

IPC No. and title: AWWDA/AFD/NWSP/W-04B/2023,

*Construction Works For water and sanitation in the Informal Settlements in Nairobi project - Lot 2 Eastern
Nairobi Works*
]

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Certification *[Quality / Environmental / Health and Security]*
[Delete as appropriate]

DESCRIPTION	INFORMATIONS
Identification of the certificate:	_____ <i>[Insert full name of the certificate]</i>
Date of Issue:	_____ <i>[Insert day, month, year of first certificate award]</i>
Areas covered by the certificate:	_____ <i>[Insert activities and locations]</i>
Expiry Date:	_____ <i>[Insert day, month, year]</i>
Issuer's Name:	_____ <i>[Insert full name]</i>
Address:	_____ <i>[Insert street / number / town or city / country]</i>
Telephone/Fax numbers:	_____ <i>[Insert phone/fax numbers, including country and city area codes]</i>
Email:	_____ <i>[Insert email address, if available]</i>
Compliance with international standards:	The certificate is <i>[ISO 9001, ISO 14001, ISO 45001]</i> <i>[select as appropriate]</i> <input type="checkbox"/> Yes / <input type="checkbox"/> No
If no, proof of conformity with ISO standards by the Bidder:	The Bidder shall provide a conformity assessment of its certificate by an internationally recognized Accredited Certification Body.

The Bidder shall fill this Form for each Certification required under criterion 5.1 of Section III, Evaluation and Qualification Criteria

Form EXP–ESHS:
Environmental, Social, Health and Safety (ESHS) Experience

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

JV Member's Name: *[insert full name]*

IPC No. and title: AWWDA/AFD/NWSP/W-04B/2023,

Construction Works For water and sanitation in the Informal Settlements in Nairobi - Lot 2 Eastern Nairobi Works

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Similar Contract No: <i>[insert number] of [insert number of similar contracts required]</i>	Information		
Contract Identification:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert contract name and number, if applicable]</i>		
Short Project Description (main scope and key values of project):	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert short project description]</i>		
Award Date:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert day, month, year]</i>		
Completion Date:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert day, month, year]</i>		
Role in contract: <i>[Check the appropriate box]</i>	<input type="checkbox"/> Prime Contractor	<input type="checkbox"/> Member in JV	<input type="checkbox"/> Management Contractor
Total Contract Amount:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert total contract amount in local currency]</i>		<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert total contract amount in US\$ equivalent]</i>
If party in a JV or subcontractor, specify participation of Total Contract Amount:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert a percentage amount]</i>	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert total contract amount in local currency]</i>	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert total contract amount in US\$ equivalent]</i>
Employer's Name:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert full name]</i>		
Address:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert street / number / town or city / country]</i>		
Telephone/Fax numbers:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert telephone / fax numbers, including country and city area codes]</i>		
Email:	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <i>[Insert email address, if available]</i>		

Similar Contract No: <i>[insert number] of [insert number of similar contracts required]</i>	Information
<p>Description of the ESHS challenges and measures implemented under the contract:</p> <p>a) ESHS Challenge</p> <p>b) ESHS Risk Assessment Level</p> <p>c) ESHS implemented measures (as per criterion 5.3 of Section III - Evaluation and Qualification Criteria)</p> <p>d) ESHS Knowhow Transfer or ESHS Local Staff Capacity Building (as per criterion 5.4, if any, of Section III - Evaluation and Qualification Criteria)</p>	<p><i>[Insert description]</i></p> <p><i>[Insert classification of risk assessment as per development bank classification if applicable]</i></p> <p><i>[Provide a document supporting the implementation of ESHS measures, acceptable to the Employer¹]</i></p> <p><i>[Provide evidence of successful²:</i></p> <ul style="list-style-type: none"> – <i>ESHS knowhow transfer to local partners or subcontractors; or</i> – <i>ESHS capacity building to local staff under the contract.]</i>

¹ For example, ESHS activity reports, ESHS final reports, ESHS inspection reports, supervision Engineer's reports, etc. Only documents evidencing implementation of ESHS measures shall be accepted.

² For example, ESHS activity reports presenting training activities, training materials with attendance sheets, etc. Only documents evidencing ESHS knowhow transfer or ESHS local staff capacity building shall be accepted.

Form or Bid Security

Demand Guarantee

Beneficiary: *The Chief Executive Officer, Athi Water Works Development Agency*

Invitation of Bids No.: *AWWDA/AFD/NWSP/W-04B/2023*

Date: _____

Bid Guarantee No.: _____

Guarantor: _____

We have been informed that _____ (hereinafter called "**the Bidder**") has submitted or will submit to the Beneficiary its bid (hereinafter called "**the Bid**") for the execution of **Construction Works for Water and Sanitation in the Informal Settlements in Nairobi - Lot 2 Eastern Nairobi Works** - under Invitation for Bids No. **AWWDA/AFD/NWSP/W-04B/2023** ("**the IFB**").

Furthermore, we understand that, according to the Beneficiary's conditions, Bids must be supported by a Bid guarantee.

At the request of the Bidder, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____) upon receipt by us of the Beneficiary's first demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Bidder:

- a) Has withdrawn its Bid during the period of Bid validity set forth in the Bidder's Letter of Bid ("the Bid Validity Period"), or any extension thereto provided by the Bidder; or
- b) Having been notified of the acceptance of its Bid by the Beneficiary during the Bid Validity Period or any extension thereto provided by the Bidder, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the performance security, in accordance with the Instructions to Bidders ("**ITB**") of the Beneficiary's Bidding Documents.

This guarantee will expire:

- a) if the Bidder is the successful Bidder, upon our receipt of copies of the contract agreement signed by the Bidder and the performance security issued to the Beneficiary in relation to such contract agreement; or
- b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Bidder of the results of the bidding process; or (ii) twenty-eight days after the end of the Bid Validity Period.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

_____ [Signature(s)]

Section V – Eligibility Criteria

Eligibility in AFD-Financed Procurement

1. Financing allocated by AFD to a Contracting Authority has been entirely untied since 1st January 2002. To the exception of any equipment or any sector which is subject to an embargo by the United Nations, the European Union or France, all goods, works, plants, consulting services and non-consulting services are eligible for AFD financing regardless of the country of origin of the supplier, contractor, subcontractor, consultant or subconsultant inputs or resources used in the implementation processes. The Contracting Authority means the Purchaser, the Employer, the Client, as the case may be, for the procurement of goods, works, plants, consulting services or non-consulting services.
2. Natural or legal Persons¹ (including all members of a joint venture or any of their suppliers, contractors, subcontractors, consultants or subconsultants) shall not be awarded an AFD-financed contract if, on the date of submission of an application, a bid or a proposal, or on the date of award of a contract, they:
 - 2.1 Are bankrupt or being wound up or ceasing their activities, are having their activities administered by the courts, have entered into receivership, or are in any analogous situation arising from a similar procedure;
 - 2.2 Have been:
 - a) convicted, within the past five years by a court decision, which has the force of res judicata in the country where the contract is implemented, of fraud, corruption or of any other offense committed during a procurement process or performance of a contract, unless they provide supporting information together with their Statement of Integrity (Form available as Appendix to the Application, Bid or Proposal Submission Form) which shows that this conviction is not relevant in the context of the Contract;
 - b) subject to an administrative sanction within the past five years by the European Union or by the competent authorities of the country where they are constituted, for fraud, corruption or for any other offense committed during a procurement process or performance of a contract, unless they provide supporting information together with their Statement of Integrity (Form available as Appendix to the Application, Bid or Proposal Submission Form) which shows that this sanction is not relevant in the context of the Contract;
 - c) convicted, within the past five years by a court decision, which has the force of res judicata, of fraud, corruption or of any other offense committed during the procurement process or performance of an AFD-financed contract;
 - 2.3 Are listed for financial sanctions by the United Nations, the European Union and/or France for the purposes of fight-against-terrorist financing or threat to international peace and security;
 - 2.4 Have been subject within the past five years to a contract termination fully settled against them for significant or persistent failure to comply with their contractual obligations during contract performance, unless this termination was challenged and dispute resolution is still pending or has not confirmed a full settlement against them;
 - 2.5 Have not fulfilled their fiscal obligations regarding payments of taxes in accordance with the legal provisions of either the country where they are constituted or the Contracting Authority's country;
 - 2.6 Are subject to an exclusion decision of the World Bank and are listed on the website <http://www.worldbank.org/debarr>, unless they provide supporting information together with their Statement of Integrity (Form available as Appendix to the Application, Bid or Proposal Submission Form) which shows that this exclusion is not relevant in the context of the Contract;

¹ Means any Person whether natural or legal, firm, company, corporation, government, state or state agency or any association, or group of two or more of the foregoing (whether or not having separate legal status).

- 2.7 Have created false documents or committed misrepresentation in documentation requested by the Contracting Authority as part of the procurement process of the Contract.
3. State-owned entities may compete only if they can establish that they (i) are legally and financially autonomous, and (ii) operate under commercial law. To be eligible, a state-owned entity shall establish to AFD's satisfaction, through all relevant documents, including its Charter and other information AFD may request, that it: (i) is a legal entity separate from their state (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to their state, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt.

Section VI – AFD Policy – Corrupt and Fraudulent Practices - Environmental and Social Responsibility

1. Corrupt and Fraudulent Practices

The Contracting Authority and the suppliers, contractors, subcontractors, consultants or subconsultants must observe the highest standard of ethics during the procurement process and performance of the contract. The Contracting Authority means the Purchaser, the Employer, the Client, as the case may be, for the procurement of goods, works, plants, consulting services or non-consulting services.

By signing the Statement of Integrity the suppliers, contractors, subcontractors, consultants or subconsultants declare that (i) “it did not engage in any practice likely to influence the contract award process to the Contracting Authority’s detriment, and that it did not and will not get involved in any anti-competitive practice”, and that (ii) “the procurement process and the performance of the contract did not and shall not give rise to any act of corruption or fraud”.

Moreover, AFD requires including in the Procurement Documents and AFD-financed contracts a provision requiring that suppliers, contractors, subcontractors, consultants or subconsultants will permit AFD to inspect their accounts and records relating to the procurement process and performance of the AFD-financed contract, and to have them audited by auditors appointed by AFD.

AFD reserves the right to take any action it deems appropriate to check that these ethics rules are observed and reserves, in particular, the rights to:

- a) Reject a proposal for a contract award if it is established that during the selection process the bidder or consultant that is recommended for the award has been convicted of corruption, directly or by means of an agent, or has engaged in fraud or anti-competitive practices in view of being awarded the Contract;
- b) Declare misprocurement when it is established that, at any time, the Contracting Authority, the suppliers, contractors, subcontractors, consultants or subconsultants their representatives have engaged in acts of corruption, fraud or anti-competitive practices during the procurement process or performance of the contract without the Contracting Authority having taken appropriate action in due time satisfactory to AFD to remedy the situation, including by failing to inform AFD at the time they knew of such practices.

AFD defines, for the purposes of this provision, the terms set forth below as follows:

- a) Corruption of a Public Officer means:
 - The act of promising, offering or giving to a Public Officer, directly or indirectly, an undue advantage of any kind for himself or for another Person¹ or entity, for such Public Officer to act or refrain from acting in his official capacity; or
 - The act by which a Public Officer solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another Person or entity, for such Public Officer to act or refrain from acting in his official capacity.
- b) A Public Officer shall be construed as meaning:
 - Any person who holds a legislative, executive, administrative or judicial mandate (within the country of the Contracting Authority) regardless of whether that natural Person was nominated or elected, regardless of the permanent or temporary, paid or unpaid nature of the position and regardless of the hierarchical level the natural Person occupies;
 - Any other natural Person who performs a public function, including for a State institution or a State-owned company, or who provides a public service;

¹ Means any Person whether natural or legal, firm, company, corporation, government, state or state agency or any association, or group of two or more of the foregoing (whether or not having separate legal status).

- Any other natural Person defined as a Public Officer by the national laws of the country of the Contracting Authority.
- c) Corruption of a Private Person² means:
 - The act of promising, offering or giving to any Private Person, directly or indirectly, an undue advantage of any kind for himself or for another Person or entity, for such Private Person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations; or;
 - The act by which any Private Person solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another Person or entity, for such Private Person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations.
- d) Fraud means any dishonest conduct (act or omission), whether or not it constitutes a criminal offence, deliberately intended to deceive others, to intentionally conceal items, to violate or vitiate consent, to circumvent legal or regulatory requirements and/or to violate internal rules in order to obtain illegitimate profit.
- e) Anti-competitive practices mean:
 - Any concerted or implied practices which have as their object or effect the prevention, restriction or distortion of competition within a marketplace, especially where they (i) limit access to the marketplace or free exercise of competition by other undertakings, (ii) prevent free, competition-driven price determination by artificially causing price increases or decreases, (iii) restrict or control production, markets, investments or technical progress; or (iv) divide up market shares or sources of supply;
 - Any abuse by one undertaking or a group of undertakings which hold a dominant position on an internal market or on a substantial part of it;
 - Any practice whereby prices are quoted or set unreasonably low, the object of which is to eliminate an undertaking or any of its products from a market or to prevent it from entering the market.

2. **Environmental and Social Responsibility**

In order to promote sustainable development, AFD seeks to ensure that internationally recognised environmental and social standards are complied with. Suppliers, contractors, subcontractors, consultants or subconsultants for AFD-financed contracts shall consequently undertake in the Statement of Integrity to:

- a) Comply with and ensure that all their subcontractors or subconsultants comply with international environmental and labour standards, consistent with applicable law and regulations in the country of implementation of the contract, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties;
- b) Implement environmental and social risks mitigation measures when specified in the environmental and social management plan (ESMP) provided by the Contracting Authority.

² Means any natural Person other than a Public Officer.

PART 2 – Works Requirements

Section VII – Works Requirements

Contents

1. SCOPE OF WORKS

The Scope of Works is as follows:

Mji wa Huruma

Water Supply

- a. Lay 1.4km distribution lines
- b. Laying of 0.15km of DN 110mm and provision of a fire hydrant
- c. Replacement of 3No phased out model PPDs
- d. Installation of 6 No. PPDs
- e. Installation of 9 No. 5000 litres storage tank at each PPD
- f. Rehabilitation of 1 No. existing borehole
- g. Minor rehabilitation of 1 No. existing water kiosks
- h. Construction of 1 no. water kiosk

Additional Works-Githogoro

- i. Laying of 4km distribution lines
- j. 50 household connections

Sanitation

- k. Construction of 1 no. ablution block comprising of toilets and bathing facilities with NCWSC water connection.
- l. Rehabilitation of biodigester and water connection to NCWSC distribution mains. Installation of 10,000 litre storage tank at Mji Wa Huruma bio-centre

Additional Works-Githogoro

- m. Construction of 2 biocentres
- n. Rehabilitation of 1 public toilet

Matopeni

Water Supply

- a. Laying of water distribution lines totalling to 4 km.
- b. Construction of 50m³ Ground steel tank
- c. Installation of solar power system to serve two (2) public boreholes.
- d. Installation of 50 No. water last mile connections.

Sanitation

- a. Sewer extensions totalling 1.6km.
- b. Rehabilitation of existing lateral sewers 1km.
- c. Installation of 50 No. sewer last mile connections.
- d. Construction of 1 bio-centre

Mariguini

Water Supply

- a. Laying of 1200m of DN 50mm waterlines.
- b. Construction of additional 3No. PPDs
- c. Rehabilitation of 3No. water kiosks.
- d. Construction of 4 No water meter chambers

Sanitation

- e. Laying 1.8km of sewers
- f. Reconstruction of Kanu Grounds Ablution Block.

Kamola

Water Supply

- a. Extension of main lines- 150m.
- b. Construction of 1 No additional PPD.
- c. Construction of 3 No. water meter chambers.

Sanitation

- d. Sewer extensions - 300m lateral sewers.

Kiambiu

Water Supply

- a. Extension of waterlines – 3.7 km.
- b. Installation of 29 new PPDs. Replacement of 4 non-functional PPD Machines.
- c. Installation of hybrid solar system for 1 No. borehole
- d. Installation of 100 last mile water connections

2. SPECIFICATIONS

The Specifications to be used for the Works are:

- (i) Technical Specifications
- (ii) Specifications for Environmental, Social, Health and Safety (ESHS) Management of the Works
- (iii) Security specifications

The `Specifications are given in Volume II of the Bidding Document.

3. DRAWINGS

The Engineering Drawings are given in Volume III of the Bidding Documents

PART 3 – Conditions of Contract (CC) and Contracts Forms

Section VIII – General Conditions (GC)

ATHI WATER WORKS DEVELOPMENT AGENCY

[Name of Employer]

Construction of Water and Sanitation Services for the Nairobi Informal Settlements in Nairobi – Lot 2 Esten Nairobi Works

[Name of Contract]

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1 General Provisions

1.1 Definitions

In the Conditions of Contract ("these Conditions"), which include Particular Conditions, Parts A and B, and these General Conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

1.1.1 The Contract

1.1.1.1 "**Contract**" means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Specification, the Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance.

1.1.1.2 "**Contract Agreement**" means the contract agreement referred to in Sub-Clause 1.6 [*Contract Agreement*].

1.1.1.3 "**Letter of Acceptance**" means the letter of formal acceptance, signed by the Employer, of the Letter of Tender, including any annexed memoranda comprising agreements between and signed by both Parties. If there is no such letter of acceptance, the expression "Letter of Acceptance" means the Contract Agreement and the date of issuing or receiving the Letter of Acceptance means the date of signing the Contract Agreement.

1.1.1.4 "**Letter of Tender**" means the document entitled letter of tender or letter of bid, which was completed by the Contractor and includes the signed offer to the Employer for the Works.

1.1.1.5 "**Specification**" means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

1.1.1.6 "**Drawings**" means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract.

1.1.1.7 "**Schedules**" means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Tender, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices.

1.1.1.8 "**Tender**" means the Letter of Tender and all other documents which the Contractor submitted with the Letter of Tender, as included in the Contract.

1.1.1.9 "**Bill of Quantities**", "**Daywork Schedule**" and "**Schedule of Payment Currencies**" mean the documents so named (if any) which are comprised in the Schedules.

1.1.1.10 "**Contract Data**" means the pages completed by the Employer entitled contract data which constitute Part A of the Particular Conditions.

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|-------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1.2 | Parties and Persons | <p>1.1.2.1 "Party" means the Employer or the Contractor, as the context requires.</p> <p>1.1.2.2 "Employer" means the person named as employer in the Contract Data and the legal successors in title to this person.</p> <p>1.1.2.3 "Contractor" means the person(s) named as contractor in the Letter of Tender accepted by the Employer and the legal successors in title to this person(s).</p> <p>1.1.2.4 "Engineer" means the person appointed by the Employer to act as the Engineer for the purposes of the Contract and named in the Contract Data, or other person appointed from time to time by the Employer and notified to the Contractor under Sub-Clause 3.4 [<i>Replacement of the Engineer</i>].</p> <p>1.1.2.5 "Contractor's Representative" means the person named by the Contractor in the Contract or appointed from time to time by the Contractor under Sub-Clause 4.3 [<i>Contractor's Representative</i>], who acts on behalf of the Contractor.</p> <p>1.1.2.6 "Employer's Personnel" means the Engineer, the assistants referred to in Sub-Clause 3.2 [<i>Delegation by the Engineer</i>] and all other staff, labour and other employees of the Engineer and of the Employer; and any other personnel notified to the Contractor, by the Employer or the Engineer, as Employer's Personnel.</p> <p>1.1.2.7 "Contractor's Personnel" means the Contractor's Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.</p> <p>1.1.2.8 "Subcontractor" means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.</p> <p>1.1.2.9 "DB" means the person or three persons appointed under Sub-Clause 20.2 [<i>Appointment of the Dispute Board</i>] or Sub-Clause 20.3 [<i>Failure to Agree on the Composition of the Dispute Board</i>].</p> <p>1.1.2.10 "FIDIC" means the <i>Fédération Internationale des Ingénieurs-Conseils</i>, the international federation of consulting engineers.</p> <p>1.1.2.11 "Bank" means the financing institution (if any) named in the Contract Data.</p> <p>1.1.2.12 "Borrower" means the person (if any) named as the borrower in the Contract Data.</p> |
| 1.1.3 | Dates, Tests, Periods and Completion | <p>1.1.3.1 "Base Date" means the date 28 days prior to the latest date for submission of the Tender.</p> <p>1.1.3.2 "Commencement Date" means the date notified under Sub-Clause 8.1 [<i>Commencement of Works</i>].</p> <p>1.1.3.3 "Time of Completion" means the time for completing the Works or a Section (as the case may be) under Sub-Clause 8.2 [<i>Time for Completion</i>], as stated in the Contract Data (with any extension under Sub-Clause 8.4 [<i>Extension of Time for Completion</i>]), calculated from the Commencement Date.</p> |

- 1.1.3.4 **"Tests on Completion"** means the tests which are specified in the Contract or agreed by both Parties or instructed as a Variation, and which are carried out under Clause 9 [*Tests on Completion*] before the Works or a Section (as the case may be) are taken over by the Employer.
- 1.1.3.5 **"Taking-Over Certificate"** means a certificate issued under Clause 10 [*Employer's Taking Over*].
- 1.1.3.6 **"Test after Completion"** means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Employer.
- 1.1.3.7 **"Defects Notification Period"** means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [*Completion of Outstanding Work and Remedying Defects*], which extends over 365 days except if otherwise stated in the Contract Data (with any extension under Sub-Clause 11.3 [*Extension of Defects Notification Period*]), calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [*Taking Over of the Works and Sections*].
- 1.1.3.8 **"Performance Certificate"** means the certificate issued under Sub-Clause 11.9 [*Performance Certificate*].
- 1.1.3.9 **"Day"** means a calendar day and **"year"** means 365 days.
- 1.1.4 Money and Payments
- 1.1.4.1 **"Accepted Contract Amount"** means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.
- 1.1.4.2 **"Contract Price"** means the price defined in Sub-Clause 14.1 [*The Contract Price*], and includes adjustments in accordance with the Contract.
- 1.1.4.3 **"Cost"** means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.
- 1.1.4.4 **"Final Payment Certificate"** means the payment certificate issued under Sub-Clause 14.13 [*Issue of Final Payment Certificate*].
- 1.1.4.5 **"Final Statement"** means the statement defined in Sub-Clause 14.11 [*Application for Final Payment Certificate*].
- 1.1.4.6 **"Foreign Currency"** means a currency in which part (or all) of the Contract Price is payable, but not the Local Currency.
- 1.1.4.7 **"Interim Payment Certificate"** means a payment certificate issued under Clause 14 [*Contract Price and Payment*].
- 1.1.4.8 **"Local Currency"** means the currency of the Country.
- 1.1.4.9 **"Payment Certificate"** means a payment certificate issued under Clause 14 [*Contract Price and Payment*].
- 1.1.4.10 **"Provisional Sum"** means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [*Provisional Sums*].
- 1.1.4.11 **"Retention Money"** means the accumulated retention moneys which the Employer retains under Sub-Clause 14.3 [*Application*

for Interim Payment Certificates] and pays under Sub-Clause 14.9 *[Payment of Retention Money]*.

- 1.1.4.12 **"Statement"** means a statement submitted by the Contractor as part of an application, under Clause 14 *[Contract Price and Payment]*, for a payment certificate.
- 1.1.5 Works and Goods
- 1.1.5.1 **"Contractor's Equipment"** means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes Temporary Works, Employer's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.
- 1.1.5.2 **"Goods"** means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.
- 1.1.5.3 **"Materials"** means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.
- 1.1.5.4 **"Permanent Works"** means the permanent works to be executed by the Contractor under the Contract.
- 1.1.5.5 **"Plant"** means the apparatus, machinery and other equipment intended to form or forming part of the Permanent Works, including vehicles purchased for the Employer and relating to the construction or operation of the Works.
- 1.1.5.6 **"Section"** means a part of the Works specified in the Contract Data as a Section (if any).
- 1.1.5.7 **"Temporary Works"** means all temporary works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.
- 1.1.5.8 **"Works"** mean the Permanent Works and the Temporary Works, or either of them as appropriate.
- 1.1.6 Other Definitions
- 1.1.6.1 **"Contractor's Documents"** means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.
- 1.1.6.2 **"Country"** means the country in which the Site (or most of it) is located, where the Permanent Works are to be executed.
- 1.1.6.3 **"Employer's Equipment"** means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Employer.
- 1.1.6.4 **"Force Majeure"** is defined in Clause 19 *[Force Majeure]*.
- 1.1.6.5 **"Laws"** means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.
- 1.1.6.6 **"Performance Security"** (means the security (or securities, if any) under Sub-Clause 4.2 *[Performance Security]*).
- 1.1.6.7 **"Site"** means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant

and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.

- 1.1.6.8 **"Unforeseeable"** means not reasonably foreseeable by an experienced contractor by the Base Date.
- 1.1.6.9 **"Variation"** means any change to the Works, which is instructed or approved as a variation under Clause 13 [*Variations and Adjustments*].
- 1.1.6.10 **"Notice of Dissatisfaction"** means the notice given by either Party to the other under Sub-Clause 20.4 [*Obtaining Dispute Board's Decision*] indicating its dissatisfaction and intention to commence arbitration.

1.2 Interpretation

In the Contract, except where the context requires otherwise:

- a) Words indicating one gender include all genders;
- b) Words indicating the singular also include the plural and words indicating the plural also include the singular;
- c) Provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing;
- d) "Written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and
- e) The word "tender" is synonymous with "bid" and "tenderer" with "Bidder" and the words "tender documents" with "bidding documents".

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

In these Conditions, provisions including the expression "Cost plus profit" require this profit to be one-twentieth (5%) of this Cost unless otherwise indicated in the Contract Data.

1.3 Communications

Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

- a) In writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Contract Data; and
- b) Delivered, sent or transmitted to the address for the recipient's communications as stated in the Contract Data. However:
 - (i) If the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
 - (ii) If the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the Engineer, a copy shall be sent to the Engineer or the other Party, as the case may be.

1.4 Law and Language

The Contract shall be governed by the law of the country or other jurisdiction stated in the Contract Data.

The ruling language of the Contract shall be that stated in the Contract Data.

The language for communications shall be that stated in the Contract Data. If no language is stated there, the language for communications shall be the ruling language of the Contract.

- 1.5 **Priority of Documents** The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:
- a) The Contract Agreement (if any);
 - b) The Letter of Acceptance;
 - c) The Letter of Tender;
 - d) The Particular Conditions – Part A;
 - e) The Particular Conditions – Part B;
 - f) These General Conditions;
 - g) The Specification;
 - h) The Drawings; and
 - i) The Schedules and any other documents forming part of the Contract.
- If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.
- 1.6 **Contract Agreement** The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless the Particular Conditions establish otherwise. The Contract Agreement shall be based upon the form annexed to the Particular Conditions. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer.
- 1.7 **Assignment** Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party:
- a) May assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party, and
 - b) May, as security in favour of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract.
- 1.8 **Care and Supply of Documents** The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.
- Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer six copies of each of the Contractor's Documents.
- The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.
- If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.
- 1.9 **Delayed Drawings or Instructions** The Contractor shall give notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable.

The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and the nature and amount of the delay or disruption likely to be suffered if it is late.

If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
- b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

However, if and to the extent that the Engineer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

1.10 Employer's Use of Contractor's Documents

As between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.

The Contractor shall be deemed (by signing the Contract) to give to the Employer a non-terminable transferable non-exclusive royalty-free licence to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This licence shall:

- a) Apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works;
- b) Entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works; and
- c) In the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.

The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Employer for purposes other than those permitted under this Sub-Clause.

1.11 Contractor's Use of Employer's Documents

As between the Parties, the Employer shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Employer. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract.

They shall not, without the Employer's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

- 1.12 Confidential Details The Contractor's and the Employer's Personnel shall disclose all such confidential and other information as may be reasonably required in order to verify compliance with the Contract and allow its proper implementation.
- Each of them shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.
- 1.13 Compliance with Laws The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions:
- a) The Employer shall have obtained (or shall obtain) the planning, zoning, building permit or similar permission for the Permanent Works, and any other permissions described in the Specification as having been (or to be) obtained by the Employer; and the Employer shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and
 - b) The Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Employer harmless against and from the consequences of any failure to do so, unless the Contractor is impeded to accomplish these actions and shows evidence of its diligence.
- 1.14 Joint and Several Liability If the Contractor constitutes (under applicable Laws) a joint venture, consortium or other unincorporated grouping of two or more persons:
- a) These persons shall be deemed to be jointly and severally liable to the Employer for the performance of the Contract;
 - b) These persons shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these persons; and
 - c) The Contractor shall not alter its composition or legal status without the prior consent of the Employer.
- 1.15 Inspections and Audit by the Bank The Contractor shall permit the Bank and/or persons appointed by the Bank to inspect the Site and/or the Contractor's accounts and records relating to the performance of the Contract and to have such accounts and records audited by auditors appointed by the Bank if required by the Bank.

2 The Employer

- 2.1 Right of Access to the Site The Employer shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the Contract Data. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Employer is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Employer shall do so in the time and manner stated in the Specification. However, the Employer may withhold any such right or possession until the Performance Security has been received.
- If no such time is stated in the Contract Data, the Employer shall give the Contractor right of access to, and possession of, the Site within such times as required to enable the Contractor to proceed without disruption in accordance with the programme submitted under Sub-Clause 8.3 [*Programme*].

If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Employer to give any such right or possession within such time, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
- b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

However, if and to the extent that the Employer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

2.2 Permits, Licences or Approval

The Employer shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:

- a) Copies of the Laws of the Country which are relevant to the Contract but are not readily available, and
- b) Any permits, licences or approvals required by the Laws of the Country:
 - (i) Which the Contractor is required to obtain under Sub-Clause 1.13 [*Compliance with Laws*];
 - (ii) For the delivery of Goods, including clearance through customs; and
 - (iii) For the export of Contractor's Equipment when it is removed from the Site.

2.3 Employer's Personnel

The Employer shall be responsible for ensuring that the Employer's Personnel and the Employer's other contractors on the Site:

- a) Co-operate with the Contractor's efforts under Sub-Clause 4.6 [*Co-operation*]; and
- b) Take actions similar to those which the Contractor is required to take under sub-paragraphs (a), (b) and (c) of Sub-Clause 4.8 [*Safety Procedures*] and under Sub-Clause 4.18 [*Protection of the Environment*].

2.4 Employer's Financial Arrangements

The Employer shall submit, before the Commencement Date and thereafter within 28 days after receiving any request from the Contractor, reasonable evidence that financial arrangements have been made and are being maintained which will enable the Employer to pay the Contract Price punctually (as estimated at that time) in accordance with Clause 14 [*Contract Price and Payment*]. Before the Employer makes any material change to his financial arrangements, the Employer shall give notice to the Contractor with detailed particulars.

In addition, if the Bank has notified to the Borrower that the Bank has suspended disbursements under its loan, which finances in whole or in part the execution of the Works, the Employer shall give notice of such suspension to the Contractor with detailed particulars, including the date of such notification, with a copy to the Engineer, within 7 days of the Borrower having received the suspension notification from the Bank. If alternative funds will be available in appropriate currencies to the Employer to continue making

payments to the Contractor beyond a date 60 days after the date of Bank notification of the suspension, the Employer shall provide reasonable evidence in his notice of the extent to which such funds will be available.

2.5 Employer's Claims

If the Employer considers himself to be entitled to any payment under any Clause of these Conditions or otherwise in connection with the Contract, and/or to any extension of the Defects Notification Period, the Employer or the Engineer shall give notice and particulars to the Contractor. However, notice is not required for payments due under Sub-Clause 4.19 [*Electricity, Water and Gas*], under Sub-Clause 4.20 [*Employer's Equipment and Free-Issue Materials*], or for other services requested by the Contractor.

The notice shall be given as soon as practicable and no longer than 28 days after the Employer became aware, or should have become aware, of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.

The particulars shall specify the Clause or other basis of the claim, and shall include substantiation of the amount and/or extension to which the Employer considers himself to be entitled in connection with the Contract. The Engineer shall then proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine (i) the amount (if any) which the Employer is entitled to be paid by the Contractor, and/or (ii) the extension (if any) of the Defects Notification Period in accordance with Sub-Clause 11.3 [*Extension of Defects Notification Period*].

This amount may be included as a deduction in the Contract Price and Payment Certificates. The Employer shall only be entitled to set off against or make any deduction from an amount certified in a Payment Certificate, or to otherwise claim against the Contractor, in accordance with this Sub-Clause.

3 The Engineer

3.1 Engineer's Duties and Authority

The Employer shall appoint the Engineer who shall carry out the duties assigned to him in the Contract. The Engineer's staff shall include suitably qualified engineers and other professionals who are competent to carry out these duties.

The Engineer shall have no authority to amend the Contract.

The Engineer may exercise the authority attributable to the Engineer as specified in or necessarily to be implied from the Contract. If the Engineer is required to obtain the approval of the Employer before exercising a specified authority, the requirements shall be as stated in the Particular Conditions. The Employer shall promptly inform the Contractor of any change to the authority attributed to the Engineer.

However, whenever the Engineer exercises a specified authority for which the Employer's approval is required, then (for the purposes of the Contract) the Employer shall be deemed to have given approval.

Except as otherwise stated in these Conditions:

- a) Whenever carrying out duties or exercising authority, specified in or implied by the Contract, the Engineer shall be deemed to act for the Employer;
- b) The Engineer has no authority to relieve either Party of any duties, obligations or responsibilities under the Contract;
- c) Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract,

including responsibility for errors, omissions, discrepancies and non-compliances; and

- d) Any act by the Engineer in response to a Contractor's request except as otherwise expressly specified shall be notified in writing to the Contractor within 28 days of receipt.

The following provisions shall apply:

The Engineer shall obtain the specific approval of the Employer before taking action under the following Sub-Clauses of these Conditions:

- a) Sub-Clause 4.12: agreeing or determining an extension of time and/or additional cost;
- b) Sub-Clause 13.1: instructing a Variation, except;
 - (i) In an emergency situation as determined by the Engineer, or
 - (ii) If such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the Contract Data;
- c) Sub-Clause 13.3: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 13.1 or 13.2;
- d) Sub-Clause 13.4: Specifying the amount payable in each of the applicable currencies.

Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Employer.

3.2 Delegation by the Engineer

The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation. These assistants may include a resident engineer, and/or independent inspectors appointed to inspect and/or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing and shall not take effect until copies have been received by both Parties. However, unless otherwise agreed by both Parties, the Engineer shall not delegate the authority to determine any matter in accordance with Sub-Clause 3.5 [*Determinations*].

Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorised to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:

- a) Any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Engineer to reject the work, Plant or Materials;
- b) If the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who

shall promptly confirm, reverse or vary the determination or instruction.

- 3.3 Instructions of the Engineer
- The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the Works and the remedying of any defects, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated under this Clause. If an instruction constitutes a Variation, Clause 13 [*Variations and Adjustments*] shall apply.

The Contractor shall comply with the instructions given by the Engineer or delegated assistant, on any matter related to the Contract. Whenever practicable, their instructions shall be given in writing. If the Engineer or a delegated assistant:

- a) Gives an oral instruction;
- b) Receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction; and
- c) Does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation;

then the confirmation shall constitute the written instruction of the Engineer or delegated assistant (as the case may be).

- 3.4 Replacement of the Engineer
- If the Employer intends to replace the Engineer, the Employer shall, not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended replacement Engineer. If the Contractor considers the intended replacement Engineer to be unsuitable, he has the right to raise objection against him by notice to the Employer, with supporting particulars, and the Employer shall give full and fair consideration to this objection.

- 3.5 Determinations
- Whenever these Conditions provide that the Engineer shall proceed in accordance with this Sub-Clause 3.5 to agree or determine any matter, the Engineer shall consult with each Party in an endeavour to reach agreement. If agreement is not achieved, the Engineer shall make a fair determination in accordance with the Contract, taking due regard of all relevant circumstances.

The Engineer shall give notice to both Parties of each agreement or determination, with supporting particulars, within 28 days from the receipt of the corresponding claim or request except when otherwise specified. Each Party shall give effect to each agreement or determination unless and until revised under Clause 20 [*Claims, Disputes and Arbitration*].

4 The Contractor

- 4.1 Contractor's General Obligations
- The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Engineer's instructions, and shall remedy any defects in the Works.

The Contractor shall provide the Plant and Contractor's Documents specified in the Contract, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.

All equipment, material, and services to be incorporated in or required for the Works shall have their origin in any eligible source country as defined by the Bank.

The Contractor shall be responsible for the adequacy, stability and safety of all Site operations and of all methods of construction. Except to the extent

specified in the Contract, the Contractor (i) shall be responsible for all Contractor's Documents, Temporary Works, and such design of each item of Plant and Materials as is required for the item to be in accordance with the Contract, and (ii) shall not otherwise be responsible for the design or specification of the Permanent Works.

The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.

If the Contract specifies that the Contractor shall design any part of the Permanent Works, then unless otherwise stated in the Particular Conditions:

- a) The Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the procedures specified in the Contract;
- b) These Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [*Law and Language*], and shall include additional information required by the Engineer to add to the Drawings for co-ordination of each Party's designs;
- c) The Contractor shall be responsible for this part and it shall, when the Works are completed, be fit for such purposes for which the part is intended as are specified in the Contract; and
- d) Prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the "as-built" documents and, if applicable, operation and maintenance manuals in accordance with the Specification and in sufficient detail for the Employer to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [*Taking Over of the Works and Sections*] until these documents and manuals have been submitted to the Engineer.

4.2 Performance Security

The Contractor shall obtain (at his cost) a Performance Security for proper performance, in the amount stated in the Contract Data and denominated in the currency(ies) of the Contract or in a freely convertible currency acceptable to the Employer. If an amount is not stated in the Contract Data, this Sub-Clause shall not apply.

The Contractor shall deliver the Performance Security to the Employer within 28 days after receiving the Letter of Acceptance, and shall send a copy to the Engineer. The Performance Security shall be issued by a reputable bank or financial institution selected by the Contractor, and shall be in the form annexed to the Particular Conditions, as stipulated by the Employer in the Contract Data, or in another form approved by the Employer.

The Contractor shall ensure that the Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects. If the terms of the Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance Certificate by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the Performance Security until the Works have been completed and any defects have been remedied.

The Employer shall not make a claim under the Performance Security, except for amounts to which the Employer is entitled under the Contract.

The Employer shall indemnify and hold the Contractor harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from a claim under the Performance Security to the extent to which the Employer was not entitled to make the claim.

The Employer shall return the Performance Security to the Contractor within 21 days after receiving a copy of the Performance Certificate.

Without limitation to the provisions of the rest of this Sub-Clause, whenever the Engineer determines an addition or a reduction to the Contract Price as a result of a change in cost and/or legislation, or as a result of a Variation, amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor shall at the Engineer's request promptly increase, or may decrease, as the case may be, the value of the Performance Security in that currency by an equal percentage.

4.3 Contractor's Representative

The Contractor shall appoint the Contractor's Representative and shall give him all authority necessary to act on the Contractor's behalf under the Contract.

Unless the Contractor's Representative is named in the Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent the name and particulars of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked in terms of Sub-Clause 6.9 [*Contractor's Personnel*], or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.

The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint a replacement.

The whole time of the Contractor's Representative shall be given to directing the Contractor's performance of the Contract. If the Contractor's Representative is to be temporarily absent from the Site during the execution of the Works, a suitable replacement person shall be appointed, subject to the Engineer's prior consent, and the Engineer shall be notified accordingly.

The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.3 [*Instructions of the Engineer*].

The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at any time revoke the delegation. Any delegation or revocation shall not take effect until the Engineer has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.

The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause 1.4 [*Law and Language*]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

4.4 Subcontractors

The Contractor shall not subcontract the whole of the Works.

The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were the acts or defaults of the Contractor. Unless otherwise stated in the Particular Conditions:

- a) The Contractor shall not be required to obtain consent to suppliers solely of Materials, or to a subcontract for which the Subcontractor is named in the Contract;

- b) The prior consent of the Engineer shall be obtained to other proposed Subcontractors;
- c) The Contractor shall give the Engineer not less than 28 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site; and
- d) Each subcontract shall include provisions which would entitle the Employer to require the subcontract to be assigned to the Employer under Sub-Clause 4.5 [*Assignment of Benefit of Subcontract*] (if or when applicable) or in the event of termination under Sub-Clause 15.2 [*Termination by Employer*].

The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.12 [*Confidential Details*] apply equally to each Subcontractor.

Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from the Country to be appointed as Subcontractors.

- 4.5 Assignment of Benefit of Subcontractor If a Subcontractor's obligations extend beyond the expiry date of the relevant Defects Notification Period and the Engineer, prior to this date, instructs the Contractor to assign the benefit of such obligations to the Employer, then the Contractor shall do so. Unless otherwise stated in the assignment, the Contractor shall have no liability to the Employer for the work carried out by the Subcontractor after the assignment takes effect.

- 4.6 Co-operation The Contractor shall, as specified in the Contract or as instructed by the Engineer, allow appropriate opportunities for carrying out work to:

- a) The Employer's Personnel;
- b) Any other contractors employed by the Employer; and
- c) The personnel of any legally constituted public authorities;

who may be employed in the execution on or near the Site of any work not included in the Contract.

Any such instruction shall constitute a Variation if and to the extent that it causes the Contractor to suffer delays and/or to incur Unforeseeable Cost. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor.

If, under the Contract, the Employer is required to give to the Contractor possession of any foundation, structure, plant or means of access in accordance with Contractor's Documents, the Contractor shall submit such documents to the Engineer in the time and manner stated in the Specification.

- 4.7 Setting Out The Contractor shall set out the Works in relation to original points, lines and levels of reference specified in the Contract or notified by the Engineer. The Contractor shall be responsible for the correct positioning of all parts of the Works, and shall rectify any error in the positions, levels, dimensions or alignment of the Works.

The Employer shall be responsible for any errors in these specified or notified items of reference, but the Contractor shall use reasonable efforts to verify their accuracy before they are used.

If the Contractor suffers delay and/or incurs Cost from executing work which was necessitated by an error in these items of reference, and an experienced contractor could not reasonably have discovered such error and avoided this delay and/or Cost, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
- b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine (i) whether and (if so) to what extent the error could not reasonably have been discovered, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

4.8 Safety Procedures

The Contractor shall:

- a) Comply with all applicable safety regulations;
- b) Take care for the safety of all persons entitled to be on the Site;
- c) Use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons;
- d) Provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 10 [*Employer's Taking Over*]; and
- e) Provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

4.9 Quality Assurance

The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Engineer shall be entitled to audit any aspect of the system.

Details of all procedures and compliance documents shall be submitted to the Engineer for information before each design and execution stage is commenced. When any document of a technical nature is issued to the Engineer, evidence of the prior approval by the Contractor himself shall be apparent on the document itself.

Compliance with the quality assurance system shall not relieve the Contractor of any of his duties, obligations or responsibilities under the Contract.

4.10 Site Data

The Employer shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Employer's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Employer shall similarly make available to the Contractor all such data which come into the Employer's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.

To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):

- a) The form and nature of the Site, including sub-surface conditions;
- b) The hydrological and climatic conditions;

- c) The extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects;
- d) The Laws, procedures and labour practices of the Country; and
- e) The Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.
- 4.11 Sufficiency of the Accepted Contract Amount
- The Contractor shall be deemed to:
- a) Have satisfied himself as to the correctness and sufficiency of the Accepted Contract Amount; and
- b) Have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in Sub-Clause 4.10 *[Site Data]*.
- Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.
- 4.12 Unforeseeable Physical Conditions
- In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.
- If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Engineer as soon as practicable.
- This notice shall describe the physical conditions, so that they can be inspected by the Engineer, and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Engineer may give. If an instruction constitutes a Variation, Clause 13 *[Variations and Adjustments]* shall apply.
- If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to notice under Sub-Clause 20.1 *[Contractor's Claims]* to:
- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 *[Extension of Time for Completion]*; and
- b) Payment of any such Cost, which shall be included in the Contract Price.
- Upon receiving such notice and inspecting and/or investigating these physical conditions, the Engineer shall proceed in accordance with Sub-Clause 3.5 *[Determinations]* to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.
- However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Engineer may also review whether other physical conditions in similar parts of the Works (if any) were more favourable than could reasonably have been foreseen when the Contractor submitted the Tender. If and to the extent that these more favourable conditions were encountered, the Engineer may proceed in accordance with Sub-Clause 3.5 *[Determinations]*

to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under subparagraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.

The Engineer shall take account of any evidence of the physical conditions foreseen by the Contractor when submitting the Tender, which shall be made available by the Contractor, but shall not be bound by the Contractor's interpretation of any such evidence.

4.13 Rights of Way and Facilities

Unless otherwise specified in the Contract the Employer shall provide effective access to and possession of the Site including special and/or temporary rights-of-way which are necessary for the Works. The Contractor shall obtain, at his risk and cost, any additional rights of way or facilities outside the Site which he may require for the purposes of the Works.

4.14 Avoidance of Interference

The Contractor shall not interfere unnecessarily or improperly with:

- a) The convenience of the public; or
- b) The access to and use and occupation of all roads and footpaths, irrespective of whether they are public or in the possession of the Employer or of others.

The Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.

4.15 Access Route

The Contractor shall be deemed to have been satisfied as to the suitability and availability of access routes to the Site at Base Date. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes.

Except as otherwise stated in these Conditions:

- a) The Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;
- b) The Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
- c) The Employer shall not be responsible for any claims which may arise from the use or otherwise of any access route;
- d) The Employer does not guarantee the suitability or availability of particular access routes; and
- e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.

4.16 Transport of Goods

Unless otherwise stated in the Particular Conditions:

- a) The Contractor shall give the Engineer not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;
- b) The Contractor shall be responsible for packing, loading, transporting, receiving, unloading, storing and protecting all Goods and other things required for the Works; and
- c) The Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal

- fees and expenses) resulting from the transport of Goods, and shall negotiate and pay all claims arising from their transport.
- 4.17 Contractor's Equipment The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.
- 4.18 Protection of Environment The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.
- The Contractor shall ensure that emissions, surface discharges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.
- 4.19 Electricity, Water and Gas The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require for his construction activities and to the extent defined in the Specifications, for the tests.
- The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specification. The Contractor shall, at his risk and cost, provide any apparatus necessary for his use of these services and for measuring the quantities consumed.
- The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [*Employer's Claims*] and Sub-Clause 3.5 [*Determinations*]. The Contractor shall pay these amounts to the Employer.
- 4.20 Employer's Equipment and Free-issues Materials The Employer shall make the Employer's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:
- a) The Employer shall be responsible for the Employer's Equipment; except that
 - b) The Contractor shall be responsible for each item of Employer's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.
- The appropriate quantities and the amounts due (at such stated prices) for the use of Employer's Equipment shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [*Employer's Claims*] and Sub-Clause 3.5 [*Determinations*]. The Contractor shall pay these amounts to the Employer.
- The Employer shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Specification. The Employer shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them, and shall promptly give notice to the Engineer of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Employer shall immediately rectify the notified shortage, defect or default.
- After this visual inspection, the free-issue materials shall come under the care, custody and control of the Contractor. The Contractor's obligations of inspection, care, custody and control shall not relieve the Employer of liability for any shortage, defect or default not apparent from a visual inspection.

4.21 Progress Reports

Unless otherwise stated in the Particular Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.

Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

Each report shall include:

- a) Charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [*Nominated Subcontractors*]);
- b) Photographs showing the status of manufacture and of progress on the Site;
- c) For the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:
 - (i) Commencement of manufacture;
 - (ii) Contractor's inspections;
 - (iii) Tests; and
 - (iv) Shipment and arrival at the Site;
- d) The details described in Sub-Clause 6.10 [*Records of Contractor's Personnel and Equipment*];
- e) Copies of quality assurance documents, test results and certificates of Materials;
- f) List of notices given under Sub-Clause 2.5 [*Employer's Claims*] and notices given under Sub-Clause 20.1 [*Contractor's Claims*];
- g) Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
- h) Comparisons of actual and planned progress, with details of any events or circumstances which may jeopardise the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

4.22 Security of the Site

Unless otherwise stated in the Particular Conditions:

- a) The Contractor shall be responsible for keeping unauthorised persons off the Site, and
- b) Authorised persons shall be limited to the Contractor's Personnel and the Employer's Personnel; and to any other personnel notified to the Contractor, by the Employer or the Engineer, as authorised personnel of the Employer's other contractors on the Site.

4.23 Contractor's Operations on Site

The Contractor shall confine his operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the Engineer as additional working areas. The Contractor shall take all necessary precautions to keep Contractor's Equipment and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacent land.

During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction, and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required.

Upon the issue of a Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which the Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave that part of the Site and the Works in a clean and safe condition. However, the Contractor may retain on Site, during the Defects Notification Period, such Goods as are required for the Contractor to fulfil obligations under the Contract.

4.24 Fossils

All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Employer. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.

The Contractor shall, upon discovery of any such finding, promptly give notice to the Engineer, who shall issue instructions for dealing with it. If the Contractor suffers delay and/or incurs Cost from complying with the instructions, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
- b) Payment of any such Cost, which shall be included in the Contract Price.

After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

5 Nominated Subcontractors

5.1 Definition of "Nominated Subcontractor"

In the Contract, "nominated Subcontractor" means a Subcontractor:

- a) Who is stated in the Contract as being a nominated Subcontractor; or
- b) Whom the Engineer, under Clause 13 [*Variations and Adjustments*], instructs the Contractor to employ as a Subcontractor subject to Sub-Clause 5.2 [*Objection to Notification*].

5.2 Objection to Nomination

The Contractor shall not be under any obligation to employ a nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Engineer as soon as practicable, with supporting particulars. An objection shall be deemed reasonable if it arises from (among other things) any of the following matters, unless the Employer agrees in writing to indemnify the Contractor against and from the consequences of the matter:

- a) There are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength;
- b) The nominated Subcontractor does not accept to indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, his agents and employees; or
- c) The nominated Subcontractor does not accept to enter into a subcontract which specifies that, for the subcontracted work (including design, if any), the nominated Subcontractor shall:

- (i) Undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract;
 - (ii) Indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities; and
 - (iii) Be paid only if and when the Contractor has received from the Employer payments for sums due under the Subcontract referred to under Sub-Clause 5.3 [*Payment to nominated Subcontractors*].
- 5.3 Payments to Nominated Subcontractors The Contractor shall pay to the nominated Subcontractor the amounts shown on the nominated Subcontractor's invoices approved by the Contractor which the Engineer certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with sub-paragraph (b) of Sub-Clause 13.5 [*Provisional Sums*], except as stated in Sub-Clause 5.4 [*Evidence of Payments*].
- 5.4 Evidence of Payments Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:
 - a) Submits this reasonable evidence to the Engineer, or
 - b)
 - (i) Satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts; and
 - (ii) Submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement,

then the Employer may (at his sole discretion) pay, direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Employer, the amount which the nominated Subcontractor was directly paid by the Employer.

6 Staff and Labour

- 6.1 Engagement of Staff and Labour Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, feeding, transport, and, when appropriate, housing.

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour with appropriate qualifications and experience from sources within the Country.
- 6.2 Rates of Wages and Conditions of Labour The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.

The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the Laws of the

- Country for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.
- 6.3 Persons in the Service of Employer The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Employer's Personnel.
- 6.4 Labour Laws The Contractor shall comply with all the relevant labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.
- The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.
- 6.5 Working Hours No work shall be carried out on the Site on locally recognised days of rest, or outside the normal working hours stated in the Contract Data, unless:
- a) Otherwise stated in the Contract;
 - b) The Engineer gives consent; or
 - c) The work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer.
- 6.6 Facilities for Staff and Labour Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.
- The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.
- 6.7 Health and Safety The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.
- The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.
- The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Engineer may reasonably require.
- HIV-AIDS Prevention. The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.
- The Contractor shall throughout the contract (including the Defects Notification Period): (i) conduct Information, Education and Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labour (including all the Contractor's employees, all Subcontractors and any

other Contractor's or Employer's personnel employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behaviour with respect to, of Sexually Transmitted Diseases (STD) - or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular; (ii) provide male or female condoms for all Site staff and labour as appropriate; and (iii) provide for STI and HIV/AIDS screening, diagnosis, counselling and referral to a dedicated national STI and HIV/AIDS programme, (unless otherwise agreed) of all Site staff and labour.

The Contractor shall include in the programme to be submitted for the execution of the Works under Sub-Clause 8.3 an alleviation programme for Site staff and labour and their families in respect of Sexually Transmitted Infections (STI) and Sexually Transmitted Diseases (STD) including HIV/AIDS. The STI, STD and HIV/AIDS alleviation programme shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Sub-Clause and the related specification. For each component, the programme shall detail the resources to be provided or utilised and any related sub-contracting proposed. The programme shall also include provision of a detailed cost estimate with supporting documentation. Payment to the Contractor for preparation and implementation this programme shall not exceed the Provisional Sum dedicated for this purpose.

6.8 Contractor's
Superintendence

Throughout the execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.

Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 1.4 [*Law and Language*]) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.

6.9 Contractor's Personnel

The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Engineer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:

- a) Persists in any misconduct or lack of care;
- b) Carries out duties incompetently or negligently;
- c) Fails to conform with any provisions of the Contract; or
- d) Persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

6.10 Records of
Contractor's Personnel
and Equipment

The Contractor shall submit, to the Engineer, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the Site. Details shall be submitted each calendar month, in a form approved by the Engineer, until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

6.11 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and protection of persons and property on and near the Site.

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| 6.12 Foreign Personnel | <p>The Contractor may bring in to the Country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work permits. The Employer will, if requested by the Contractor, use his best endeavours in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national or government permission required for bringing in the Contractor's personnel.</p> <p>The Contractor shall be responsible for the return of these personnel to the place where they were recruited or to their domicile. In the event of the death in the Country of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.</p> |
| 6.13 Supply of Foodstuffs | <p>The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.</p> |
| 6.14 Supply of Water | <p>The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.</p> |
| 6.15 Measures against
Insect and Pest
Nuisance | <p>The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce the danger to their health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.</p> |
| 6.16 Alcoholic Liquor or
Drugs | <p>The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereof by Contractor's Personnel.</p> |
| 6.17 Arms and Ammunition | <p>The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.</p> |
| 6.18 Festivals and
Religious Customs | <p>The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.</p> |
| 6.19 Funeral Arrangements | <p>The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of his local employees who may die while engaged upon the Works.</p> |
| 6.20 Prohibition of Forced
or Compulsory Labour | <p>The Contractor shall not employ forced labour, which consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labour, such as indentured labour, bonded labour or similar labour-contracting arrangements.</p> |
| 6.21 Prohibition of Harmful
Child Labour | <p>The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where the relevant labour laws of the Country have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.</p> |
| 6.22 Employment Records
Workers | <p>The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer. These records shall be included</p> |

in the details to be submitted by the Contractor under Sub-Clause 6.10 *[Records of Contractor's Personnel and Equipment]*.

6.23 Workers'
Organisations

In countries where the relevant labour laws recognise workers' rights to form and to join workers' organisations of their choosing without interference and to bargain collectively, the Contractor shall comply with such laws. Where the relevant labour laws substantially restrict workers' organisations, the Contractor shall enable alternative means for the Contractor's Personnel to express their grievances and protect their rights regarding working conditions and terms of employment. In either case described above, and where the relevant labour laws are silent, the Contractor shall not discourage the Contractor's Personnel from forming or joining workers' organisations of their choosing or from bargaining collectively, and shall not discriminate or retaliate against the Contractor's Personnel who participate, or seek to participate, in such organisations and bargain collectively. The Contractor shall engage with such workers' representatives. Workers' organisations are expected to fairly represent the workers in the workforce.

6.24 Non-Discrimination
and Equal Opportunity

The Contractor shall not make employment decisions on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment relationship on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment or retirement, and discipline. In countries where the relevant labour laws provide for non-discrimination in employment, the Contractor shall comply with such laws. When the relevant labour laws are silent on non-discrimination in employment, the Contractor shall meet this Sub-Clause's requirements. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination.

7 Plant, Materials and Workmanship

7.1 Manner of Execution

The Contractor shall carry out the manufacture of Plant, the production and manufacture of Materials, and all other execution of the Works:

- a) In the manner (if any) specified in the Contract;
- b) In a proper workmanlike and careful manner, in accordance with recognised good practice; and
- c) With properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract.

7.2 Samples

The Contractor shall submit the following samples of Materials, and relevant information, to the Engineer for consent prior to using the Materials in or for the Works:

- a) Manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost; and
- b) Additional samples instructed by the Engineer as a Variation.

Each sample shall be labelled as to origin and intended use in the Works.

7.3 Inspection

The Employer's Personnel shall at all reasonable times:

- a) Have full access to all parts of the Site and to all places from which natural Materials are being obtained; and
- b) During production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the

materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of Materials.

The Contractor shall give the Employer's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.

The Contractor shall give notice to the Engineer whenever any work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Engineer shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Engineer does not require to do so. If the Contractor fails to give the notice, he shall, if and when required by the Engineer, uncover the work and thereafter reinstate and make good, all at the Contractor's cost.

7.4 Testing

This Sub-Clause shall apply to all tests specified in the Contract, other than the Tests after Completion (if any).

Except as otherwise specified in the Contract, the Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labour, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Engineer, the time and place for the specified testing of any Plant, Materials and other parts of the Works.

The Engineer may, under Clause 13 [*Variations and Adjustments*], vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with the Contract, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of the Contract.

The Engineer shall give the Contractor not less than 24 hours' notice of the Engineer's intention to attend the tests. If the Engineer does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Engineer's presence.

If the Contractor suffers delay and/or incurs Cost from complying with these instructions or as a result of a delay for which the Employer is responsible, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
- b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

The Contractor shall promptly forward to the Engineer duly certified reports of the tests. When the specified tests have been passed, the Engineer shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect. If the Engineer has not attended the tests, he shall be deemed to have accepted the readings as accurate.

7.5 Rejection

If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor

shall then promptly make good the defect and ensure that the rejected item complies with the Contract.

If the Engineer requires this Plant, Materials or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the Employer to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 [*Employer's Claims*] pay these costs to the Employer.

7.6 Remedial Work

Notwithstanding any previous test or certification, the Engineer may instruct the Contractor to:

- a) Remove from the Site and replace any Plant or Materials which is not in accordance with the Contract;
- b) Remove and re-execute any other work which is not in accordance with the Contract; and
- c) Execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.

The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is specified under sub-paragraph (c).

If the Contractor fails to comply with the instruction, the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to Sub-Clause 2.5 [*Employer's Claims*] pay to the Employer all costs arising from this failure.

7.7 Ownership of Plant and Materials

Except as otherwise provided in the Contract, each item of Plant and Materials shall, to the extent consistent with the Laws of the Country, become the property of the Employer at whichever is the earlier of the following times, free from liens and other encumbrances:

- a) When it is incorporated in the Works;
- b) When the Contractor is paid the corresponding value of the Plant and Materials under Sub-Clause 8.10 [*Payment for Plant and Materials in Event of Suspension*].

7.8 Royalties

Unless otherwise stated in the Specification, the Contractor shall pay all royalties, rents and other payments for:

- a) Natural Materials obtained from outside the Site, and
- b) The disposal of material from demolitions and excavations and of other surplus material (whether natural or man-made), except to the extent that disposal areas within the Site are specified in the Contract.

8 Commencement, Delays Suspension

8.1 Commencement of Works

Except as otherwise specified in the Particular Conditions of Contract, the Commencement Date shall be the date at which the following precedent conditions have all been fulfilled and the Engineer's notification recording the agreement of both Parties on such fulfilment and instructing to commence the Work is received by the Contractor:

- a) Signature of the Contract Agreement by both Parties, and if required, approval of the Contract by relevant authorities of the Country;
- b) Delivery to the Contractor of reasonable evidence of the Employer's financial arrangements (under Sub-Clause 2.4 [*Employer's Financial Arrangements*]);

- c) Except if otherwise specified in the Contract Data, effective access to and possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.13 [*Compliance with Laws*] as required for the commencement of the Works;
- d) Receipt by the Contractor of the Advance Payment under Sub-Clause 14.2 [*Advance Payment*] provided that the corresponding bank guarantee has been delivered by the Contractor.

If the said Engineer's instruction is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract under Sub-Clause 16.2 [*Termination by Contractor*].

The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date, and shall then proceed with the Works with due expedition and without delay.

8.2 Time for Completion

The Contractor shall complete the whole of the Works, and each Section (if any), within the Time for Completion for the Works or Section (as the case may be), including:

- a) Achieving the passing of the Tests on Completion; and
- b) Completing all work which is stated in the Contract as being required for the Works or Section to be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [*Taking Over of the Works and Sections*].

8.3 Programme

The Contractor shall submit a detailed time programme to the Engineer within 28 days after receiving the notice under Sub-Clause 8.1 [*Commencement of Works*]. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:

- a) The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing;
- b) Each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [*Nominated Subcontractors*]);
- c) The sequence and timing of inspections and tests specified in the Contract; and
- d) A supporting report which includes:
 - (i) A general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works; and
 - (ii) Details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.

Unless the Engineer, within 21 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Employer's Personnel shall be entitled to rely upon the programme when planning their activities.

The Contractor shall promptly give notice to the Engineer of specific probable future events or circumstances which may adversely affect the work, increase

the Contract Price or delay the execution of the Works. The Engineer may require the Contractor to submit an estimate of the anticipated effect of the future event or circumstances, and/or a proposal under Sub-Clause 13.3 *[Variation Procedure]*.

If, at any time, the Engineer gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contract or to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Engineer in accordance with this Sub-Clause.

8.4 Extension of Time for Completion

The Contractor shall be entitled subject to Sub-Clause 20.1 *[Contractor's Claims]* to an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause 10.1 *[Taking Over of the Works and Sections]* is or will be delayed by any of the following causes:

- a) A Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 13.3 *[Variation Procedure]*) or other substantial change in the quantity of an item of work included in the Contract;
- b) A cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions;
- c) Exceptionally adverse climatic conditions;
- d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions; or
- e) Any delay, impediment or prevention caused by or attributable to the Employer, the Employer's Personnel, or the Employer's other contractors.

If the Contractor considers himself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the Engineer in accordance with Sub-Clause 20.1 *[Contractor's Claims]*. When determining each extension of time under Sub-Clause 20.1, the Engineer shall review previous determinations and may increase, but shall not decrease, the total extension of time.

8.5 Delays Caused by Authorities

If the following conditions apply, namely:

- a) The Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country;
- b) These authorities delay or disrupt the Contractor's work; and
- c) The delay or disruption was Unforeseeable,

then this delay or disruption will be considered as a cause of delay under subparagraph (b) of Sub-Clause 8.4 *[Extension of Time for Completion]*.

8.6 Rate of Progress

If, at any time:

- a) Actual progress is too slow to complete within the Time for Completion; and/or
- b) Progress has fallen (or will fall) behind the current programme under Sub-Clause 8.3 *[Programme]*,

other than as a result of a cause listed in Sub-Clause 8.4 *[Extension of Time for Completion]*, then the Engineer may instruct the Contractor to submit, under Sub-Clause 8.3 *[Programme]*, a revised programme and supporting report describing the revised methods which the Contractor proposes to adopt in order to expedite progress and complete within the Time for Completion.

Unless the Engineer notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel and/or Goods, at the risk and cost of the Contractor. If these revised methods cause the Employer to incur additional costs, the Contractor shall subject to notice under Sub-Clause 2.5 [*Employer's Claims*] pay these costs to the Employer, in addition to delay damages (if any) under Sub-Clause 8.7 below.

Additional costs of revised methods including acceleration measures, instructed by the Engineer to reduce delays resulting from causes listed under Sub-Clause 8.4 [*Extension of Time for Completion*] shall be paid by the Employer, without generating, however, any other additional payment benefit to the Contractor.

8.7 Delay Damages

If the Contractor fails to comply with Sub-Clause 8.2 [*Time for Completion*], the Contractor shall subject to notice under Sub-Clause 2.5 [*Employer's Claims*] pay delay damages to the Employer for this default. These delay damages shall be the sum stated in the Contract Data, which shall be paid for every day which shall elapse between the relevant Time for Completion and the date stated in the Taking-Over Certificate. However, the total amount due under this Sub-Clause shall not exceed the maximum amount of delay damages (if any) stated in the Contract Data.

These delay damages shall be the only damages due from the Contractor for such default, other than in the event of termination under Sub-Clause 15.2 [*Termination by Employer*] prior to completion of the Works. These damages shall not relieve the Contractor from his obligation to complete the Works, or from any other duties, obligations or responsibilities which he may have under the Contract.

8.8 Suspension of Work

The Engineer may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.

The Engineer may also notify the cause for the suspension. If and to the extent that the cause is notified and is the responsibility of the Contractor, the following Sub-Clauses 8.9, 8.10 and 8.11 shall not apply.

8.9 Consequences of Suspension

If the Contractor suffers delay and/or incurs Cost from complying with the Engineer's instructions under Sub-Clause 8.8 [*Suspension of Work*] and/or from resuming the work, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
- b) Payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

The Contractor shall not be entitled to an extension of time for, or to payment of the Cost incurred in, making good the consequences of the Contractor's faulty design, workmanship or materials, or of the Contractor's failure to protect, store or secure in accordance with Sub-Clause 8.8 [*Suspension of Work*].

8.10 Payment for Plant and Materials in Event of Suspension

The Contractor shall be entitled to payment of the value (as at the date of suspension) of Plant and/or Materials which have not been delivered to Site, if:

- a) The work on Plant or delivery of Plant and/or Materials has been suspended for more than 28 days; and
 - b) The Contractor has marked the Plant and/or Materials as the Employer's property in accordance with the Engineer's instructions.
- 8.11 Prolonged Suspension If the suspension under Sub-Clause 8.8 [*Suspension of Work*] has continued for more than 84 days, the Contractor may request the Engineer's permission to proceed. If the Engineer does not give permission within 28 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 13 [*Variations and Adjustments*] of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 [*Termination by Contractor*].
- 8.12 Resumption of Work After the permission or instruction to proceed is given, the Contractor and the Engineer shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension after receiving from the Engineer an instruction to this effect under Clause 13 [*Variations and Adjustments*].

9 Tests on Completion

- 9.1 Contractor's Obligations The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub-Clause 7.4 [*Testing*], after providing the documents in accordance with sub-paragraph (d) of Sub-Clause 4.1 [*Contractor's General Obligations*].
- The Contractor shall give to the Engineer not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.
- In considering the results of the Tests on Completion, the Engineer shall make allowances for the effect of any use of the Works by the Employer on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.
- 9.2 Delayed Tests If the Tests on Completion are being unduly delayed by the Employer, Sub-Clause 7.4 [*Testing*] (fifth paragraph) and/or Sub-Clause 10.3 [*Interference with Tests on Completion*] shall be applicable.
- If the Tests on Completion are being unduly delayed by the Contractor, the Engineer may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the Tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.
- If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Employer's Personnel may proceed with the Tests at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.
- 9.3 Retesting If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 [*Rejection*] shall apply, and the Engineer or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

- 9.4 Failure to Pass Tests on Completion
- If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 *[Retesting]*, the Engineer shall be entitled to:
- a) Order further repetition of Tests on Completion under Sub-Clause 9.3 *[Retesting]*;
 - b) If the failure deprives the Employer of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Employer shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause 11.4 *[Failure to Remedy Defects]*; or
 - c) Issue a Taking-Over Certificate, if the Employer so requests.

In the event of sub-paragraph (c), the Contractor shall proceed in accordance with all other obligations under the Contract, and the Contract Price shall be reduced by such amount as shall be appropriate to cover the reduced value to the Employer as a result of this failure. Unless the relevant reduction for this failure is stated (or its method of calculation is defined) in the Contract, the Employer may require the reduction to be (i) agreed by both Parties (in full satisfaction of this failure only) and paid before this Taking-Over Certificate is issued, or (ii) determined and paid under Sub-Clause 2.5 *[Employer's Claims]* and Sub-Clause 3.5 *[Determinations]*.

10 Employer's Taking Over

- 10.1 Taking Over of the Works and Sections
- Except as stated in Sub-Clause 9.4 *[Failure to Pass Tests on Completion]*, the Works shall be taken over by the Employer when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 8.2 *[Time for Completion]* and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.

The Contractor may apply by notice to the Engineer for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section.

The Engineer shall, within 28 days after receiving the Contractor's application:

- a) Issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or
- b) Reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.

If the Engineer fails either to issue the Taking-Over Certificate or to reject the Contractor's application within the period of 28 days, and if the Works or Section (as the case may be) are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

- 10.2 Taking Over of Parts of the Works
- The Engineer may, at the sole discretion of the Employer, issue a Taking-Over Certificate for any part of the Permanent Works.

The Employer shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Engineer has issued a Taking-Over Certificate for this part. However, if the Employer does use any part of the Works before the Taking-Over Certificate is issued:

- a) The part which is used shall be deemed to have been taken over as from the date on which it is used;
- b) The Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Employer, and
- c) If requested by the Contractor, the Engineer shall issue a Taking-Over Certificate for this part.

After the Engineer has issued a Taking-Over Certificate for a part of the Works, the Contractor shall be given the earliest opportunity to take such steps as may be necessary to carry out any outstanding Tests on Completion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.

If the Contractor incurs Cost as a result of the Employer taking over and/or using a part of the Works, other than such use as is specified in the Contract or agreed by the Contractor, the Contractor shall (i) give notice to the Engineer and (ii) be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to payment of any such Cost plus profit, which shall be included in the Contract Price. After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine this Cost and profit.

If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages thereafter for completion of the remainder of the Works shall be reduced. Similarly, the delay damages for the remainder of the Section (if any) in which this part is included shall also be reduced. For any period of delay after the date stated in this Taking-Over Certificate, the proportional reduction in these delay damages shall be calculated as the proportion which the value of the part so certified bears to the value of the Works or Section (as the case may be) as a whole. The Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these proportions. The provisions of this paragraph shall only apply to the daily rate of delay damages under Sub-Clause 8.7 [*Delay Damages*], and shall not affect the maximum amount of these damages.

10.3 Interference with Tests on Completion

If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Employer is responsible, the Employer shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.

The Engineer shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Engineer shall require the Tests on Completion to be carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.

If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the Tests on Completion, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
- b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

10.4 Surfaces Requiring Reinstatement

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

11 Defects Liability

11.1 Completion of Outstanding Work and Remedying Defects

In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fair wear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:

- a) Complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer; and
- b) Execute all work required to remedy defects or damage, as may be notified by (or on behalf of) the Employer on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).

If a defect appears or damage occurs, the Contractor shall be notified accordingly, by (or on behalf of) the Employer.

11.2 Cost of Remedying Defects

All work referred to in sub-paragraph (b) of Sub-Clause 11.1 [*Completion of Outstanding Work and Remedying Defects*] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:

- a) Any design for which the Contractor is responsible;
- b) Plant, Materials or workmanship not being in accordance with the Contract; or
- c) Failure by the Contractor to comply with any other obligation.

If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Employer, and Sub-Clause 13.3 [*Variation Procedure*] shall apply.

11.3 Extension of Defects Notification Period

The Employer shall be entitled subject to Sub-Clause 2.5 [*Employer's Claims*] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or by reason of damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.

If delivery and/or erection of Plant and/or Materials was suspended under Sub-Clause 8.8 [*Suspension of Work*] or Sub-Clause 16.1 [*Contractor's Entitlement to Suspend Work*], the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/or Materials would otherwise have expired.

11.4 Failure to Remedy Defects

If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by (or on behalf of) the Employer, on or by which

the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.

If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under Sub-Clause 11.2 [*Cost of Remedying Defects*], the Employer may (at his option):

- a) Carry out the work himself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to Sub-Clause 2.5 [*Employer's Claims*] pay to the Employer the costs reasonably incurred by the Employer in remedying the defect or damage;
- b) Require the Engineer to agree or determine a reasonable reduction in the Contract Price in accordance with Sub-Clause 3.5 [*Determinations*]; or
- c) If the defect or damage deprives the Employer of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contract or otherwise, the Employer shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

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| 11.5 | Removal of Defective Work | If the defect or damage cannot be remedied expeditiously on the Site and the Employer gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security. |
| 11.6 | Further Tests | <p>If the work of remedying of any defect or damage may affect the performance of the Works, the Engineer may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 28 days after the defect or damage is remedied.</p> <p>These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 [<i>Cost of Remedying Defects</i>], for the cost of the remedial work.</p> |
| 11.7 | Right of Access | Until the Performance Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Employer's reasonable security restrictions. |
| 11.8 | Contractor to Search | The Contractor shall, if required by the Engineer, search for the cause of any defect, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 [<i>Cost of Remedying Defects</i>], the Cost of the search plus profit shall be agreed or determined by the Engineer in accordance with Sub-Clause 3.5 [<i>Determinations</i>] and shall be included in the Contract Price. |
| 11.9 | Performance Certificate | <p>Performance of the Contractor's obligations shall not be considered to have been completed until the Engineer has issued the Performance Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.</p> <p>The Engineer shall issue the Performance Certificate within 28 days after the latest of the expiry dates of the Defects Notification Periods, or as soon</p> |

thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects. A copy of the Performance Certificate shall be issued to the Employer.

Only the Performance Certificate shall be deemed to constitute acceptance of the Works.

11.10 Unfulfilled
Obligations

After the Performance Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

11.11 Clearance of Site

Upon receiving the Performance Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

If all these items have not been removed within 28 days after receipt by the Contractor of the Performance Certificate, the Employer may sell or otherwise dispose of any remaining items. The Employer shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Employer's costs, the Contractor shall pay the outstanding balance to the Employer.

12 Measurement and Evaluation

12.1 Works to be Measured

The Works shall be measured, and valued for payment, in accordance with this Clause. The Contractor shall show in each application under Sub-Clauses 14.3 [*Application for Interim Payment Certificates*], 14.10 [*Statement on Completion*] and 14.11 [*Application for Final Payment Certificate*] the quantities and other particulars detailing the amounts which he considers to be entitled under the Contract.

Whenever the Engineer requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:

- a) Promptly either attend or send another qualified representative to assist the Engineer in making the measurement; and
- b) Supply any particulars requested by the Engineer.

If the Contractor fails to attend or send a representative, the measurement made by (or on behalf of) the Engineer shall be accepted as accurate.

Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.

If the Contractor examines and disagrees the records, and/or does not sign them as agreed, then the Contractor shall give notice to the Engineer of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Engineer shall review the records and either confirm or vary them and certify the payment of the undisputed part. If the Contractor does not so give notice to the Engineer within 14 days after being requested to examine the records, they shall be accepted as accurate.

12.2 Method of
Measurement

Except as otherwise stated in the Contract and notwithstanding local practice:

- a) Measurement shall be made of the net actual quantity of each item of the Permanent Works; and

- b) The method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

12.3 Evaluation

Except as otherwise stated in the Contract, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine the Contract Price by evaluating each item of work, applying the measurement agreed or determined in accordance with the above Sub-Clauses 12.1 and 12.2 and the appropriate rate or price for the item.

For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the Contract or, if there is no such item, specified for similar work.

Any item of work included in the Bill of Quantities for which no rate or price was specified shall be considered as included in other rates and prices in the Bill of Quantities and will not be paid for separately.

However, a new rate or price shall be appropriate for an item of work if:

- a)
 - (i) The measured quantity of the item is changed by more than 25% from the quantity of this item in the Bill of Quantities or other Schedule;
 - (ii) This change in quantity multiplied by such specified rate for this item exceeds 0.25% of the Accepted Contract Amount;
 - (iii) This change in quantity directly changes the Cost per unit quantity of this item by more than 1%; and
 - (iv) This item is not specified in the Contract as a "fixed rate item";

Or

- b)
 - (i) The work is instructed under Clause 13 [*Variations and Adjustments*];
 - (ii) No rate or price is specified in the Contract for this item; and
 - (iii) No specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.

Each new rate or price shall be derived from any relevant rates or prices in the Contract, with reasonable adjustments to take account of the matters described in sub-paragraph (a) and/or (b), as applicable. If no rates or prices are relevant for the derivation of a new rate or price, it shall be derived from the reasonable Cost of executing the work, together with profit, taking account of any other relevant matters.

Until such time as an appropriate rate or price is agreed or determined, the Engineer shall determine a provisional rate or price for the purposes of Interim Payment Certificates as soon as the concerned work commences.

12.4 Omissions

Whenever the omission of any work forms part (or all) of a Variation, the value of which has not been agreed, if:

- a) The Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount;
- b) The omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and
- c) This cost is not deemed to be included in the evaluation of any substituted work;

then the Contractor shall give notice to the Engineer accordingly, with supporting particulars. Upon receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine this cost, which shall be included in the Contract Price.

13 Variations and Adjustments

13.1 Right to Vary

Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal.

The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Engineer stating (with supporting particulars) that (i) the Contractor cannot readily obtain the Goods required for the Variation, or (ii) such Variation triggers a substantial change in the sequence or progress of the Works. Upon receiving this notice, the Engineer shall cancel, confirm or vary the instruction.

Each Variation may include:

- a) Changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation);
- b) Changes to the quality and other characteristics of any item of work;
- c) Changes to the levels, positions and/or dimensions of any part of the Works;
- d) Omission of any work unless it is to be carried out by others;
- e) Any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work; or
- f) Changes to the sequence or timing of the execution of the Works.

The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Engineer instructs or approves a Variation.

13.2 Value Engineering

The Contractor may, at any time, submit to the Engineer a written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Employer of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Employer of the completed Works, or (iv) otherwise be of benefit to the Employer.

The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.3 [*Variation Procedure*].

If a proposal, which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:

- a) The Contractor shall design this part;
- b) Sub-paragraphs (a) to (d) of Sub-Clause 4.1 [*Contractor's General Obligations*] shall apply; and
- c) If this change results in a reduction in the contract value of this part, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine a fee, which shall be included in the Contract Price. This fee shall be half (50%) of the difference between the following amounts:
 - (i) Such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause 13.7 [*Adjustments*]

for Changes in Legislation] and Sub-Clause 13.8 *[Adjustments for Changes in Cost]*; and

- (ii) The reduction (if any) in the value to the Employer of the varied works, taking account of any reductions in quality, anticipated life or operational efficiencies.

However, if amount (i) is less than amount (ii), there shall not be a fee.

13.3 Variation Procedure If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:

- a) A description of the proposed work to be performed and a programme for its execution;
- b) The Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 *[Programme]* and to the Time for Completion; and
- c) The Contractor's proposal for evaluation of the Variation.

The Engineer shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 *[Value Engineering]* or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.

Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.

Each Variation shall be evaluated in accordance with Clause 12 *[Measurement and Evaluation]*, unless the Engineer instructs or approves otherwise in accordance with this Clause.

13.4 Payment in Applicable Currencies If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

13.5 Provisional Sums Each Provisional Sum shall only be used, in whole or in part, in accordance with the Engineer's instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Engineer shall have instructed. For each Provisional Sum, the Engineer may instruct:

- a) Work to be executed (including Plant, Materials or services to be supplied) by the Contractor and valued under Sub-Clause 13.3 *[Variation Procedure]*; and/or
- b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 5 *[Nominated Subcontractors]*) or otherwise; and for which there shall be included in the Contract Price:
 - (i) The actual amounts paid (or due to be paid) by the Contractor; and
 - (ii) A sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If

there is no such rate, the percentage rate stated in the Contract Data shall be applied.

The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.

13.6 Daywork

For work of a minor or incidental nature, the Engineer may instruct that a Variation shall be executed on a daywork basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.

Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.

Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Engineer accurate statements in duplicate which shall include the following details of the resources used in executing the previous day's work:

- a) The names, occupations and time of Contractor's Personnel;
- b) The identification, type and time of Contractor's Equipment and Temporary Works; and
- c) The quantities and types of Plant and Materials used.

One copy of each statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [*Application for Interim Payment Certificates*].

13.7 Adjustments for Changes in Legislation

The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
- b) Payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the table of adjustment data in accordance with the provisions of Sub-Clause 13.8 [*Adjustments for Changes in Cost*].

13.8 Adjustments for
Changes in costs

In this Sub-Clause, “table of adjustment data” means the completed table of adjustment data for local and foreign currencies included in the Schedules. If there is no such table of adjustment data, this Sub-Clause shall not apply.

If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labour, Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in Costs is not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.

The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be of the following general type:

$$P_n = a + b \frac{L_n}{L_o} + c \frac{E_n}{E_o} + d \frac{M_n}{M_o} + \dots$$

Where:

"P_n" is the adjustment multiplier to be applied to the estimated contract value in the relevant currency of the work carried out in period "n", this period being a month unless otherwise stated in the Contract Data;

"a" is a fixed coefficient, stated in the relevant table of adjustment data, representing the non-adjustable portion in contractual payments;

"b", **"c"**, **"d"**, etc. are coefficients representing the estimated proportion of each cost element related to the execution of the Works, as stated in the relevant table of adjustment data; such tabulated cost elements may be indicative of resources such as labour, equipment and materials;

"L_n", **"E_n"**, **"M_n"**, etc. are the current cost indices or reference prices for period "n", expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the date 49 days prior to the last day of the period (to which the particular Payment Certificate relates); and

"L_o", **"E_o"**, **"M_o"**, etc. are the base cost indices or reference prices, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the Base Date.

The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, it shall be determined by the Engineer. For this purpose, reference shall be made to the values of the indices at stated dates for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.

In cases where the “currency of index” is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the central bank of the Country, of this relevant currency on the above date for which the index is required to be applicable.

Until such time as each current cost index is available, the Engineer shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.

If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices thereafter shall be made using either (i) each index or

price applicable on the date 49 days prior to the expiry of the Time for Completion of the Works, or (ii) the current index or price, whichever is more favourable to the Employer.

The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.

14 Contract Price and Payment

14.1 The Contract Price

Unless otherwise stated in the Particular Conditions:

- a) The Contract Price shall be agreed or determined under Sub-Clause 12.3 [*Evaluation*] and be subject to adjustments in accordance with the Contract;
- b) The Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [*Adjustments for Changes in Legislation*];
- c) Any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:
 - (i) of the Works which the Contractor is required to execute, or
 - (ii) for the purposes of Clause 12 [*Measurement and Evaluation*]; and
- d) The Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules. The Engineer may take account of the breakdown when preparing Payment Certificates, but shall not be bound by it.

Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts therefor, imported by the Contractor for the sole purpose of executing the Contract shall be exempt from the payment of import duties and taxes upon importation.

14.2 Advance Payment

The Employer shall make an advance payment, as an interest-free loan for mobilisation and cash flow support, when the Contractor submits a guarantee in accordance with this Sub-Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the Contract Data.

Unless and until the Employer receives this guarantee, or if the total advance payment is not stated in the Contract Data, this Sub-Clause shall not apply.

The Engineer shall deliver to the Employer and to the Contractor an Interim Payment Certificate for the advance payment or its first instalment after receiving a Statement (under Sub-Clause 14.3 [*Application for Interim Payment Certificates*]) and after the Employer receives (i) the Performance Security in accordance with Sub-Clause 4.2 [*Performance Security*] and (ii) a guarantee in amounts and currencies equal to the advance payment. This guarantee shall be issued by a reputable bank or financial institution selected by the Contractor and shall be in the form annexed to the Particular Conditions or in another form approved by the Employer.

The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount shall be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry

date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

Unless stated otherwise in the Contract Data, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Engineer in accordance with Sub-Clause 14.6 [*Issue of Interim Payment Certificates*], as follows:

- a) Deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds 30 percent (30%) of the Accepted Contract Amount less Provisional Sums; and
- b) Deductions shall be made at the amortisation rate stated in the Contract Data of the amount of each Interim Payment Certificate (excluding the advance payment and deductions for its repayments as well as deductions for retention money) in the currencies and proportions of the advance payment until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the time when 90 percent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment.

If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [*Termination by Employer*], Clause 16 [*Suspension and Termination by Contractor*] or Clause 19 [*Force Majeure*] (as the case may be), the whole of the balance then outstanding shall immediately become due and in case of termination under Clause 15 [*Termination by Employer*], except for Sub-Clause 15.5 [*Employer's Entitlement to Termination for Convenience*], payable by the Contractor to the Employer.

14.3 Application for Interim Payment Certificates

The Contractor shall submit a Statement in six copies to the Engineer after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers himself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [*Progress Reports*].

The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

- a) The estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);
- b) Any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.7 [*Adjustments for Changes in Legislation*] and Sub-Clause 13.8 [*Adjustments for Changes in Cost*];
- c) Any amount to be deducted for retention, calculated by applying the percentage of retention stated in the Contract Data to the total of the above amounts, until the amount so retained by the Employer reaches the limit of Retention Money (if any) stated in the Contract Data;
- d) Any amounts to be added for the advance payment and (if more than one instalment) and to be deducted for its repayments in accordance with Sub-Clause 14.2 [*Advance Payment*];

- e) Any amounts to be added and deducted for Plant and Materials in accordance with Sub-Clause 14.5 [*Plant and Materials intended for the Works*];
- f) Any other additions or deductions which may have become due under the Contract or otherwise, including those under Clause 20 [*Claims, Disputes and Arbitration*]; and
- g) The deduction of amounts certified in all previous Payment Certificates.

14.4 Schedule of Payments If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

- a) The instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 14.3 [*Application for Interim Payment Certificates*];
- b) Sub-Clause 14.5 [*Plant and Materials intended for the Works*] shall not apply; and
- c) If these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less or more than that on which this schedule of payments was based, then the Engineer may proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine revised instalments, which shall take account of the extent to which progress is less or more than that on which the instalments were previously based.

If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

14.5 Plant and Materials
Intended for the
Works

If this Sub-Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3, (i) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub-paragraph (a) of Sub-Clause 14.3 [*Application for Interim Payment Certificates*].

If the lists referred to in sub-paragraphs (b)(i) or (c)(i) below are not included in the Schedules, this Sub-Clause shall not apply.

The Engineer shall determine and certify each addition if the following conditions are satisfied:

- a) The Contractor has:
 - (i) Kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection; and
 - (ii) Submitted a statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence;

and either:

- b) The relevant Plant and Materials:
 - (i) Are those listed in the Schedules for payment when shipped;

- (ii) Have been shipped to the Country, en route to the Site, in accordance with the Contract; and
- (iii) Are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Engineer together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Employer in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [*Advance Payment*] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration;

or:

- c) The relevant Plant and Materials:
 - (i) Are those listed in the Schedules for payment when delivered to the Site; and
 - (ii) Have been delivered to and are properly stored on the Site, are protected against loss, damage or deterioration, and appear to be in accordance with the Contract.

The additional amount to be certified shall be the equivalent of eighty percent (80%) of the Engineer's determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials.

The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under subparagraph (a) of Sub-Clause 14.3 [*Application for Interim Payment Certificates*]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

14.6 Issue of Interim Payment Certificates

No amount will be certified or paid until the Employer has received and approved the Performance Security. Thereafter, the Engineer shall, within 28 days after receiving a Statement and supporting documents, deliver to the Employer and to the Contractor an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with all supporting particulars for any reduction or withholding made by the Engineer on the Statement if any.

However, prior to issuing the Taking-Over Certificate for the Works, the Engineer shall not be bound to issue an Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated in the Contract Data. In this event, the Engineer shall give notice to the Contractor accordingly.

An Interim Payment Certificate shall not be withheld for any other reason, although:

- a) If any thing supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or
- b) If the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the

Engineer, the value of this work or obligation may be withheld until the work or obligation has been performed.

The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer's acceptance, approval, consent or satisfaction.

14.7 Payment

The Employer shall pay to the Contractor:

- a) The first instalment of the advance payment within 42 days after issuing the Letter of Acceptance or within 21 days after receiving the documents in accordance with Sub-Clause 4.2 [*Performance Security*] and Sub-Clause 14.2 [*Advance Payment*], whichever is later;
- b) The amount certified in each Interim Payment Certificate within 56 days after the Engineer receives the Statement and supporting documents; or, at a time when the Bank's loan or credit (from which part of the payments to the Contractor is being made) is suspended, the amount shown on any statement submitted by the Contractor within 14 days after such statement is submitted, any discrepancy being rectified in the next payment to the Contractor; and
- c) The amount certified in the Final Payment Certificate within 56 days after the Employer receives this Payment Certificate; or, at a time when the Bank's loan or credit (from which part of the payments to the Contractor is being made) is suspended, the undisputed amount shown in the Final Statement within 56 days after the date of notification of the suspension in accordance with Sub-Clause 16.2 [*Termination by Contractor*].

Payment of the amount due in each currency shall be made into the bank account, nominated by the Contractor, in the payment country (for this currency) specified in the Contract.

14.8 Delayed Payment

If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [*Payment*], the Contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [*Payment*], irrespective (in the case of its sub-paragraph (b)) of the date on which any Interim Payment Certificate is issued.

Unless otherwise stated in the Particular Conditions, these financing charges shall be calculated at the annual rate of three percentage points above the discount rate of the central bank in the country of the currency of payment, or if not available, the interbank offered rate, and shall be paid in such currency.

The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy.

14.9 Payment or Retention Money

When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate is issued for a Section or part of the Works, a proportion of the Retention Money shall be certified and paid. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section or part, by the estimated final Contract Price.

Promptly after the latest of the expiry dates of the Defects Notification Periods, the outstanding balance of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate was issued for a Section, a proportion of the second half of the Retention Money

shall be certified and paid promptly after the expiry date of the Defects Notification Period for the Section. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section by the estimated final Contract Price.

However, if any work remains to be executed under Clause 11 [*Defects Liability*], the Engineer shall be entitled to withhold certification of the estimated cost of this work until it has been executed.

When calculating these proportions, no account shall be taken of any adjustments under Sub-Clause 13.7 [*Adjustments for Changes in Legislation*] and Sub-Clause 13.8 [*Adjustments for Changes in Cost*].

Unless otherwise stated in the Particular Conditions, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment by the Engineer, the Contractor shall be entitled to substitute a guarantee, in the form annexed to the Particular Conditions or in another form approved by the Employer and issued by a reputable bank or financial institution selected by the Contractor, for the second half of the Retention Money. The Contractor shall ensure that the guarantee is in the amounts and currencies of the second half of the Retention Money and is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects, as specified for the Performance Security in Sub-Clause 4.2. On receipt by the Employer of the required guarantee, the Engineer shall certify and the Employer shall pay the second half of the Retention Money. The release of the second half of the Retention Money against a guarantee shall then be in lieu of the release under the second paragraph of this Sub-Clause. The Employer shall return the guarantee to the Contractor within 21 days after receiving a copy of the Performance Certificate.

If the Performance Security required under Sub-Clause 4.2 is in the form of a demand guarantee, and the amount guaranteed under it when the Taking-Over Certificate is issued is more than half of the Retention Money, then the Retention Money guarantee will not be required. If the amount guaranteed under the Performance Security when the Taking-Over Certificate is issued is less than half of the Retention Money, the Retention Money guarantee will only be required for the difference between half of the Retention Money and the amount guaranteed under the Performance Security.

14.10 Statement at Completion

Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer six copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [*Application for Interim Payment Certificates*], showing:

- a) The value of all work done in accordance with the Contract up to the date stated in the Taking-Over Certificate for the Works;
- b) Any further sums which the Contractor considers to be due; and
- c) An estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.

The Engineer shall then certify in accordance with Sub-Clause 14.6 [*Issue of Interim Payment Certificates*].

14.11 Application for Final Payment Certificate

Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:

- a) The value of all work done in accordance with the Contract; and

- b) Any further sums which the Contractor considers to be due to him under the Contract or otherwise.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require within 28 days from receipt of said draft and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed. This agreed statement is referred to in these Conditions as the “Final Statement”.

However, if following discussions between the Engineer and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.4 [*Obtaining Dispute Board's Decision*] or Sub-Clause 20.5 [*Amicable Settlement*], the Contractor shall then prepare and submit to the Employer (with a copy to the Engineer) a Final Statement.

14.12 Discharge

When submitting the Final Statement, the Contractor shall submit a discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date.

14.13 Issue of Final Payment Certificate

Within 28 days after receiving the Final Statement and discharge in accordance with Sub-Clause 14.11 [*Application for Final Payment Certificate*] and Sub-Clause 14.12 [*Discharge*], the Engineer shall deliver, to the Employer and to the Contractor, the Final Payment Certificate which shall state:

- a) The amount which he fairly determines is finally due; and
- b) After giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled, the balance (if any) due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [*Application for Final Payment Certificate*] and Sub-Clause 14.12 [*Discharge*], the Engineer shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 28 days, the Engineer shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

14.14 Cessation of Employer's Liability

The Employer shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

- a) In the Final Statement; and also
- b) (Except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 14.10 [*Statement at Completion*].

However, this Sub-Clause shall not limit the Employer's liability under his indemnification obligations, or the Employer's liability in any case of fraud, deliberate default or reckless misconduct by the Employer.

- 14.15 Currencies of Payment The Contract Price shall be paid in the currency or currencies named in the Schedule of Payment Currencies. If more than one currency is so named, payments shall be made as follows:
- a) If the Accepted Contract Amount was expressed in Local Currency only:
 - (i) The proportions or amounts of the Local and Foreign Currencies, and the fixed rates of exchange to be used for calculating the payments, shall be as stated in the Schedule of Payment Currencies, except as otherwise agreed by both Parties;
 - (ii) Payments and deductions under Sub-Clause 13.5 [*Provisional Sums*] and Sub-Clause 13.7 [*Adjustments for Changes in Legislation*] shall be made in the applicable currencies and proportions; and
 - (iii) Other payments and deductions under sub-paragraphs (a) to (d) of Sub-Clause 14.3 [*Application for Interim Payment Certificates*] shall be made in the currencies and proportions specified in sub-paragraph (a)(i) above;
 - b) Payment of the damages specified in the Contract Data, shall be made in the currencies and proportions specified in the Schedule of Payment Currencies;
 - c) Other payments to the Employer by the Contractor shall be made in the currency in which the sum was expended by the Employer, or in such currency as may be agreed by both Parties;
 - d) If any amount payable by the Contractor to the Employer in a particular currency exceeds the sum payable by the Employer to the Contractor in that currency, the Employer may recover the balance of this amount from the sums otherwise payable to the Contractor in other currencies; and
 - e) If no rates of exchange are stated in the Schedule of Payment Currencies, they shall be those prevailing on the Base Date and determined by the central bank of the Country.

15 Termination by Employer

- 15.1 Notice to Correct If the Contractor fails to carry out any obligation under the Contract, the Engineer may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.
- 15.2 Termination by Employer The Employer shall be entitled to terminate the Contract if the Contractor:
- a) Fails to comply with Sub-Clause 4.2 [*Performance Security*] or with a notice under Sub-Clause 15.1 [*Notice to Correct*];
 - b) Abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract;
 - c) Without reasonable excuse fails:
 - (i) To proceed with the Works in accordance with Clause 8 [*Commencement, Delays and Suspension*]; or
 - (ii) To comply with a notice issued under Sub-Clause 7.5 [*Rejection*] or Sub-Clause 7.6 [*Remedial Work*], within 28 days after receiving it;
 - d) Subcontracts the whole of the Works or assigns the Contract without the required agreement;

- e) Becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events; or
- f) Gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:
 - (i) For doing or forbearing to do any action in relation to the Contract; or
 - (ii) For showing or forbearing to show favour or disfavour to any person in relation to the Contract,

or if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination.

In any of these events or circumstances, the Employer may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub-paragraph (e) or (f), the Employer may by notice terminate the Contract immediately.

The Employer's election to terminate the Contract shall not prejudice any other rights of the Employer, under the Contract or otherwise.

The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for him, to the Engineer. However, the Contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.

After termination, the Employer may complete the Works and/or arrange for any other entities to do so. The Employer and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.

The Employer shall then give notice that the Contractor's Equipment and Temporary Works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Employer, these items may be sold by the Employer in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

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| 15.3 | Valuation at Date of Termination | As soon as practicable after a notice of termination under Sub-Clause 15.2 <i>[Termination by Employer]</i> has taken effect, the Engineer shall proceed in accordance with Sub-Clause 3.5 <i>[Determinations]</i> to agree or determine the value of the Works, Goods and Contractor's Documents, and any other sums due to the Contractor for work executed in accordance with the Contract. |
| 15.4 | Payment after Termination | <p>After a notice of termination under Sub-Clause 15.2 <i>[Termination by Employer]</i> has taken effect, the Employer may:</p> <ul style="list-style-type: none"> a) Proceed in accordance with Sub-Clause 2.5 <i>[Employer's Claims]</i>; b) Withhold further payments to the Contractor until the costs of execution, completion and remedying of any defects, damages for |

- delay in completion (if any), and all other costs incurred by the Employer, have been established; and/or
- c) Recover from the Contractor any losses and damages incurred by the Employer and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub-Clause 15.3 [*Valuation at Date of Termination*]. After recovering any such losses, damages and extra costs, the Employer shall pay any balance to the Contractor.
- 15.5 Employer's Entitlement to Termination for Convenience
- The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security. The Employer shall not terminate the Contract under this Sub-Clause in order to execute the Works himself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor under Clause 16.2 [*Termination by Contractor*].
- After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [*Cessation of Work and Removal of Contractor's Equipment*] and shall be paid in accordance with Sub-Clause 16.4 [*Payment on Termination*].
- 15.6 Corrupt or fraudulent Practices
- If the Employer determines, based on reasonable evidence, that the Contractor has engaged in corrupt, fraudulent, collusive or coercive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days' notice to the Contractor, terminate the Contract and expel him from the Site, and the provisions of Clause 15 shall apply as if such termination had been made under Sub-Clause 15.2 [*Termination by Employer*].
- Should any employee of the Contractor be determined, based on reasonable evidence, to have engaged in corrupt, fraudulent or coercive practice during the execution of the work then that employee shall be removed in accordance with Sub-Clause 6.9 [*Contractor's Personnel*].
- For the purposes of this Sub-Clause:
- a) "**Corrupt practice**" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- b) "**Fraudulent practice**" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- c) "**Collusive practice**" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- d) "**Coercive practice**" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- e) "**Obstructive practice**" is:
- (i) Deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

- (ii) Acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Sub-Clause 1.15 *[Inspections and Audits by the Bank]*.

16 Suspension and Termination by Contractor

16.1 Contractor's Entitlement to Suspend Work

If the Engineer fails to certify in accordance with Sub-Clause 14.6 *[Issue of Interim Payment Certificates]* or the Employer fails to comply with Sub-Clause 2.4 *[Employer's Financial Arrangements]* or Sub-Clause 14.7 *[Payment]*, the Contractor may, after giving not less than 21 days' notice to the Employer, suspend work (or reduce the rate of work) unless and until the Contractor has received the Payment Certificate, reasonable evidence or payment, as the case may be and as described in the notice.

Notwithstanding the above, if the Bank has suspended disbursements under the loan or credit from which payments to the Contractor are being made, in whole or in part, for the execution of the Works, and no alternative funds are available as provided for in Sub-Clause 2.4 *[Employer's Financial Arrangements]*, the Contractor may by notice suspend work or reduce the rate of work at any time, but not less than 7 days after the Borrower having received the suspension notification from the Bank.

The Contractor's action shall not prejudice his entitlements to financing charges under Sub-Clause 14.8 *[Delayed Payment]* and to termination under Sub-Clause 16.2 *[Termination by Contractor]*.

If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.

If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 *[Contractor's Claims]* to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 *[Extension of Time for Completion]*; and
- b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 *[Determinations]* to agree or determine these matters.

16.2 Termination by Contractor

The Contractor shall be entitled to terminate the Contract if:

- a) The Contractor does not receive the reasonable evidence within 42 days after giving notice under Sub-Clause 16.1 *[Contractor's Entitlement to Suspend Work]* in respect of a failure to comply with Sub-Clause 2.4 *[Employer's Financial Arrangements]*;
- b) The Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate;
- c) The Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in Sub-Clause 14.7 *[Payment]* within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5 *[Employer's Claims]*);
- d) The Employer substantially fails to perform his obligations under the Contract in such manner as to materially and adversely affect the

economic balance of the Contract and/or the ability of the Contractor to perform the Contract;

- e) The Employer fails to comply with Sub-Clause 1.6 [*Contract Agreement*] or Sub-Clause 1.7 [*Assignment*];
- f) A prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [*Prolonged Suspension*]; or
- g) The Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events;
- h) The Contractor does not receive the Engineer's instruction recording the agreement of both Parties on the fulfilment of the conditions for the Commencement of Works under Sub-Clause 8.1 [*Commencement of Works*].

In any of these events or circumstances, the Contractor may, upon giving 14 days' notice to the Employer, terminate the Contract. However, in the case of sub-paragraph (f) or (g), the Contractor may by notice terminate the Contract immediately.

In the event the Bank suspends the loan or credit from which part or whole of the payments to the Contractor are being made, if the Contractor has not received the sums due to him upon expiration of the 14 days referred to in Sub-Clause 14.7 [*Payment*] for payments under Interim Payment Certificates, the Contractor may, without prejudice to the Contractor's entitlement to financing charges under Sub-Clause 14.8 [*Delayed Payment*], take one of the following actions, namely (i) suspend work or reduce the rate of work under Sub-Clause 16.1 above, or (ii) terminate the Contract by giving notice to the Employer, with a copy to the Engineer, such termination to take effect 14 days after the giving of the notice.

The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor, under the Contract or otherwise.

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| 16.3 | Cessation of Work and Removal of Contractor's Equipment | <p>After a notice of termination under Sub-Clause 15.5 [<i>Employer's Entitlement to Termination for Convenience</i>], Sub-Clause 16.2 [<i>Termination by Contractor</i>] or Sub-Clause 19.6 [<i>Optional Termination, Payment and Release</i>] has taken effect, the Contractor shall promptly:</p> <ul style="list-style-type: none"> a) Cease all further work, except for such work as may have been instructed by the Engineer for the protection of life or property or for the safety of the Works; b) Hand over Contractor's Documents, Plant, Materials and other work, for which the Contractor has received payment; and c) Remove all other Goods from the Site, except as necessary for safety, and leave the Site. |
| 16.4 | Payment on Termination | <p>After a notice of termination under Sub-Clause 16.2 [<i>Termination by Contractor</i>] has taken effect, the Employer shall promptly:</p> <ul style="list-style-type: none"> a) Return the Performance Security to the Contractor; b) Pay the Contractor in accordance with Sub-Clause 19.6 [<i>Optional Termination, Payment and Release</i>]; and c) Pay to the Contractor the amount of any loss or damage sustained by the Contractor as a result of this termination. |

17 Risk and Responsibility

17.1 Indemnities

The Contractor shall indemnify and hold harmless the Employer, the Employer's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

- a) Bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents; and
- b) Damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless and to the extent that any such damage or loss is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

The Employer shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in subparagraphs (d)(i), (ii) and (iii) of Sub-Clause 18.3 [*Insurance Against Injury to Persons and Damage to Property*].

17.2 Contractor's Care of the Works

The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [*Taking Over of the Works and Sections*]) for the Works, when responsibility for the care of the Works shall pass to the Employer. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part of the Works, responsibility for the care of the Section or part shall then pass to the Employer.

After responsibility has accordingly passed to the Employer, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.

If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 17.3 [*Employer's Risks*], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.

The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

17.3 Employer's Risks

The risks referred to in Sub-Clause 17.4 [*Consequences of Employer's Risks*] below, insofar as they directly affect the execution of the Works in the Country, are:

- a) War, hostilities (whether war be declared or not), invasion, act of foreign enemies;
- b) Rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war, within the Country;
- c) Riot, commotion or disorder within the Country by persons other than the Contractor's Personnel;
- d) Munitions of war, explosive materials, ionising radiation or contamination by radio-activity, within the Country, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity;
- e) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;
- f) Use or occupation by the Employer of any part of the Permanent Works, except as may be specified in the Contract;
- g) Design of any part of the Works by the Employer's Personnel or by others for whom the Employer is responsible; and
- h) Any operation of the forces of nature which is Unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate preventive precautions.

17.4 Consequences of Employer's Risks

If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Engineer and shall rectify this loss or damage to the extent required by the Engineer.

If the Contractor suffers delay and/or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
- b) Payment of any such Cost, which shall be included in the Contract Price. In the case of sub-paragraphs (f) and (g) of Sub-Clause 17.3 [*Employer's Risks*], Cost plus profit shall be payable.

After receiving this further notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

17.5 Intellectual and Industrial Property Right

In this Sub-Clause, "infringement" means an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and "claim" means a claim (or proceedings pursuing a claim) alleging an infringement.

Whenever a Party does not give notice to the other Party of any claim within 28 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.

The Employer shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:

- a) An unavoidable result of the Contractor's compliance with the Contract; or
- b) A result of any Works being used by the Employer:

- (i) For a purpose other than that indicated by, or reasonably to be inferred from, the Contract; or
- (ii) In conjunction with anything not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.

The Contractor shall indemnify and hold the Employer harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.

If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.

17.6 Limitation of Liability

Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with the Contract, other than as specifically provided in Sub-Clause 8.7 [*Delay Damages*]; Sub-Clause 11.2 [*Cost of Remedying Defects*]; Sub-Clause 15.4 [*Payment after Termination*]; Sub-Clause 16.4 [*Payment on Termination*]; Sub-Clause 17.1 [*Indemnities*]; Sub-Clause 17.4(b) [*Consequences of Employer's Risks*] and Sub-Clause 17.5 [*Intellectual and Industrial Property Rights*].

The total liability of the Contractor to the Employer, under or in connection with the Contract other than under Sub-Clause 4.19 [*Electricity, Water and Gas*], Sub-Clause 4.20 [*Employer's Equipment and Free-Issue Materials*], Sub-Clause 17.1 [*Indemnities*] and Sub-Clause 17.5 [*Intellectual and Industrial Property Rights*], shall not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in the Contract Data, or (if such multiplier or other sum is not so stated) the Accepted Contract Amount.

This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

17.7 Use of Employer's Accommodation / Facilities

The Contractor shall take full responsibility for the care of the Employer provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).

If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Employer is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.

18 Insurances

18.1 General Requirements for Insurances

In this Clause, "insuring Party" means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.

Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms approved by the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter

of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

Wherever the Employer is the insuring Party, each insurance shall be effected with insurers and in terms acceptable to the Contractor. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Employer shall act for Employer's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.

The relevant insuring Party shall, within the respective periods stated in the Contract Data (calculated from the Commencement Date), submit to the other Party:

- a) Evidence that the insurances described in this Clause have been effected; and
- b) Copies of the policies for the insurances described in Sub-Clause 18.2 [*Insurance for Works and Contractor's Equipment*] and Sub-Clause 18.3 [*Insurance against Injury to Persons and Damage to Property*].

When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.

Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes to the execution of the Works and ensure that insurance is maintained in accordance with this Clause.

Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or attempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.

If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contract, or fails to provide satisfactory evidence and copies of policies in accordance with this Sub-Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay the amount of these premiums to the other Party, and the Contract Price shall be adjusted accordingly.

Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Employer, under the other terms of the Contract or otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Employer in accordance with these obligations, liabilities or responsibilities. However, if the insuring Party fails to effect and keep in force an insurance which is available and which it is

required to effect and maintain under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.

Payments by one Party to the other Party shall be subject to Sub-Clause 2.5 [*Employer's Claims*] or Sub-Clause 20.1 [*Contractor's Claims*], as applicable.

The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to Clause 18) with insurers from any eligible source country.

18.2 Insurance for Works and Contractor's Equipment

The insuring Party shall insure the Works, Plant, Materials and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the date by which the evidence is to be submitted under sub-paragraph (a) of Sub-Clause 18.1 [*General Requirements for Insurances*], until the date of issue of the Taking-Over Certificate for the Works.

The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [*Defects Liability*]).

The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

Unless otherwise stated in the Particular Conditions, insurances under this Sub-Clause:

- a) Shall be effected and maintained by the Contractor as insuring Party;
- b) Shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated to the Party actually bearing the costs of rectifying the loss or damage,
- c) Shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [*Employer's Risks*];
- d) Shall also cover, to the extent specifically required in the bidding documents of the Contract, loss or damage to a part of the Works which is attributable to the use or occupation by the Employer of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 17.3 [*Employer's Risks*], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated in the Contract Data (if an amount is not so stated, this sub-paragraph (d) shall not apply); and
- e) May however exclude loss of, damage to, and reinstatement of:
 - (i) A part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below);

- (ii) A part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship;
- (iii) A part of the Works which has been taken over by the Employer, except to the extent that the Contractor is liable for the loss or damage; and
- (iv) Goods while they are not in the Country, subject to Sub-Clause 14.5 [*Plant and Materials intended for the Works*].

If, more than one year after the Base Date, the cover described in subparagraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Employer, with supporting particulars. The Employer shall then (i) be entitled subject to Sub-Clause 2.5 [*Employer's Claims*] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [*General Requirements for Insurances*].

18.3 Insurance against
Injury to Persons and
Damages to Property

The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [*Insurance for Works and Contractor's Equipment*]) or to any person (except persons insured under Sub-Clause 18.4 [*Insurance for Contractor's Personnel*]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

This insurance shall be for a limit per occurrence of not less than the amount stated in the Contract Data, with no limit on the number of occurrences. If an amount is not stated in the Contract Data, this Sub-Clause shall not apply.

Unless otherwise stated in the Particular Conditions, the insurances specified in this Sub-Clause:

- a) Shall be effected and maintained by the Contractor as insuring Party;
- b) Shall be in the joint names of the Parties;
- c) Shall be extended to cover liability for all loss and damage to the Employer's property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract; and
- d) May however exclude liability to the extent that it arises from:
 - (i) The Employer's right to have the Permanent Works executed on, over, under, in or through any land, and to occupy this land for the Permanent Works;
 - (ii) Damage which is an unavoidable result of the Contractor's obligations to execute the Works and remedy any defects; and
 - (iii) A cause listed in Sub-Clause 17.3 [*Employer's Risks*], except to the extent that cover is available at commercially reasonable terms.

18.4 Insurance for
Contractor's Personnel

The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.

The insurance shall cover the Employer and the Engineer against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel, except that this

insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

19 Force Majeure

19.1 Definition of Force Majeure

In this Clause, "Force Majeure" means an exceptional event or circumstance:

- a) Which is beyond a Party's control;
- b) Which such Party could not reasonably have provided against before entering into the Contract;
- c) Which, having arisen, such Party could not reasonably have avoided or overcome; and
- d) Which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

- (i) War, hostilities (whether war be declared or not), invasion, act of foreign enemies;
- (ii) Rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war;
- (iii) Riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel;
- (iv) Munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity; and
- (v) Natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

19.2 Notice of Force Majeure

If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.

The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

19.3 Duty to Minimise Delay

Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure.

A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

- 19.4 Consequences of Force Majeure
- If the Contractor is prevented from performing his substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [*Notice of Force Majeure*], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:
- a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*]; and
 - b) If the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [*Definition of Force Majeure*] and, in sub-paragraphs (ii) to (iv), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 18.2 [*Insurance for Works and Contractor's Equipment*].
- After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.
- 19.5 Force Majeure Affecting Subcontractor
- If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.
- 19.6 Optional Termination, Payment and Release
- If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 19.2 [*Notice of Force Majeure*], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [*Cessation of Work and Removal of Contractor's Equipment*].
- Upon such termination, the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include:
- a) The amounts payable for any work carried out for which a price is stated in the Contract;
 - b) The Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;
 - c) Other Cost or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;
 - d) The Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
 - e) The Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.
- 19.7 Release from Performance
- Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further

performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

- a) The Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract; and
- b) The sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [*Optional Termination, Payment and Release*] if the Contract had been terminated under Sub-Clause 19.6.

20 Claims, Disputes and Arbitration

20.1 Contractor's Claims

If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.

If the Contractor fails to give notice of a claim within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.

The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Employer's liability, the Engineer may, after receiving any notice under this Sub-Clause, monitor the record-keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Engineer to inspect all these records, and shall (if instructed) submit copies to the Engineer.

Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Engineer a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

- a) This fully detailed claim shall be considered as interim;
- b) The Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Engineer may reasonably require; and
- c) The Contractor shall send a final claim within 28 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.

Within 42 days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any

necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period.

Within the above defined period of 42 days, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [*Extension of Time for Completion*], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

If the Engineer does not respond within the timeframe defined in this Clause, either Party may consider that the claim is rejected by the Engineer and any of the Parties may refer to the Dispute Board in accordance with Sub-Clause 20.4 [*Obtaining Dispute Board's Decision*].

The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause.

20.2 Appointment of the Dispute Board

Disputes shall be referred to a DB for decision in accordance with Sub-Clause 20.4 [*Obtaining Dispute Board's Decision*]. The Parties shall appoint a DB by the date stated in the Contract Data.

The DB shall comprise, as stated in the Contract Data, either one or three suitably qualified persons ("the members"), each of whom shall be fluent in the language for communication defined in the Contract and shall be a professional experienced in the type of construction involved in the Works and with the interpretation of contractual documents. If the number is not so stated and the Parties do not agree otherwise, the DB shall comprise three persons.

If the Parties have not jointly appointed the DB 21 days before the date stated in the Contract Data and the DB is to comprise three persons, each Party shall nominate one member for the approval of the other Party. The first two members shall recommend and the Parties shall agree upon the third member, who shall act as chairman.

However, if a list of potential members has been agreed by the Parties and is included in the Contract, the members shall be selected from those on the list, other than anyone who is unable or unwilling to accept appointment to the DB.

The agreement between the Parties and either the sole member or each of the three members shall incorporate by reference the General Conditions of Dispute Board Agreement contained in the Appendix to these General Conditions, with such amendments as are agreed between them.

The terms of the remuneration of either the sole member or each of the three members, including the remuneration of any expert whom the DB consults, shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration

If at any time the Parties so agree, they may jointly refer a matter to the DB for it to give its opinion. Neither Party shall consult the DB on any matter without the agreement of the other Party.

If a member declines to act or is unable to act as a result of death, disability, resignation or termination of appointment, a replacement shall be appointed in the same manner as the replaced person was required to have been nominated or agreed upon, as described in this Sub-Clause.

The appointment of any member may be terminated by mutual agreement of both Parties, but not by the Employer or the Contractor acting alone. Unless otherwise agreed by both Parties, the appointment of the DB (including each member) shall expire when the discharge referred to in Sub-Clause 14.12 *[Discharge]* shall have become effective.

20.3 Failure to Agree on the Composition of the Dispute Board

If any of the following conditions apply, namely:

- a) The Parties fail to agree upon the appointment of the sole member of the DB by the date stated in the first paragraph of Sub-Clause 20.2 *[Appointment of the Dispute Board]*;
- b) Either Party fails to nominate a member (for approval by the other Party), or fails to approve a member nominated by the other Party, of a DB of three persons by such date;
- c) The Parties fail to agree upon the appointment of the third member (to act as chairman) of the DB by such date; or
- d) The Parties fail to agree upon the appointment of a replacement person within 42 days after the date on which the sole member or one of the three members declines to act or is unable to act as a result of death, disability, resignation or termination of appointment;

then the appointing entity or official named in the Contract Data shall, upon the request of either or both of the Parties and after due consultation with both Parties, appoint this member of the DB. This appointment shall be final and conclusive. Each Party shall be responsible for paying one-half of the remuneration of the appointing entity or official.

20.4 Obtaining Dispute Board's Decision

If a dispute (of any kind whatsoever) arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works, including any dispute as to any certificate, determination, instruction, opinion or valuation of the Engineer, either Party may refer the dispute in writing to the DB for its decision, with copies to the other Party and the Engineer. Such reference shall state that it is given under this Sub-Clause.

For a DB of three persons, the DB shall be deemed to have received such reference on the date when it is received by the chairman of the DB.

Both Parties shall promptly make available to the DB all such additional information, further access to the Site, and appropriate facilities, as the DB may require for the purposes of making a decision on such dispute. The DB shall be deemed to be not acting as arbitrator(s).

Within 84 days after receiving such reference, or within such other period as may be proposed by the DB and approved by both Parties, the DB shall give its decision, which shall be reasoned and shall state that it is given under this Sub-Clause. The decision shall be binding on both Parties, who shall promptly give effect to it unless and until it shall be revised in an amicable settlement or an arbitral award as described below. Unless the Contract has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the Works in accordance with the Contract.

If either Party is dissatisfied with the DB's decision, then either Party may, within 28 days after receiving the decision, give a Notice of Dissatisfaction to the other Party indicating its dissatisfaction and intention to commence arbitration. If the DB fails to give its decision within the period of 84 days (or as otherwise approved) after receiving such reference, then either Party may,

within 28 days after this period has expired, give a Notice of Dissatisfaction to the other Party.

In either event, this Notice of Dissatisfaction shall state that it is given under this Sub-Clause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Except as stated in Sub-Clause 20.7 [*Failure to Comply with Dispute Board's Decision*] and Sub-Clause 20.8 [*Expiry of Dispute Board's Appointment*], neither Party shall be entitled to commence arbitration of a dispute unless a Notice of Dissatisfaction has been given in accordance with this Sub-Clause.

If the DB has given its decision as to a matter in dispute to both Parties, and no Notice of Dissatisfaction has been given by either Party within 28 days after it received the DB's decision, then the decision shall become final and binding upon both Parties.

20.5 Amicable Settlement Where a Notice of Dissatisfaction has been given under Sub-Clause 20.4 above, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a Notice of Dissatisfaction in accordance with Sub-Clause 20.4 above should move to commence arbitration after the fifty-sixth day from the day on which a Notice of Dissatisfaction was given, even if no attempt at an amicable settlement has been made.

20.6 Arbitration Any dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 20.5 above and in respect of which the DB's decision (if any) has not become final and binding shall be finally settled by arbitration. Arbitration shall be conducted as follows:

- a) If the contract is with foreign contractors, International arbitration (1) with proceedings administered by the arbitration institution designated in the Contract Data, and conducted under the rules of arbitration of such institution; or, if so specified in the Contract Data, (2) international arbitration in accordance with the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL); or (3) if neither an arbitration institution nor UNCITRAL arbitration rules are specified in the Contract Data, with proceedings administered by the International Chamber of Commerce (ICC) and conducted under the ICC Rules of Arbitration; by one or more arbitrators appointed in accordance with said arbitration rules;
- b) If the Contract is with domestic contractors, arbitration with proceedings conducted in accordance with the laws of the Employer's country.

The place of arbitration shall be the neutral location specified in the Contract Data; and the arbitration shall be conducted in the language for communications defined in Sub-Clause 1.4 [*Law and Language*].

The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, and any decision of the DB, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Engineer from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.

Neither Party shall be limited in the proceedings before the arbitrators to the evidence or arguments previously put before the DB to obtain its decision, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction. Any decision of the DB shall be admissible in evidence in the arbitration.

- Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, the Engineer and the DB shall not be altered by reason of any arbitration being conducted during the progress of the Works.
- 20.7 Failure to Comply with Dispute Board's Decision
- In the event that a Party fails to comply with a final and binding DB decision, then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under Sub-Clause 20.6 *[Arbitration]*. Sub-Clause 20.4 *[Obtaining Dispute Board's Decision]* and Sub-Clause 20.5 *[Amicable Settlement]* shall not apply to this reference.
- 20.8 Expiry of Dispute Board's Appointment
- If a dispute arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works and there is no DB in place, whether by reason of the expiry of the DB's appointment or otherwise:
- a) Sub-Clause 20.4 *[Obtaining Dispute Board's Decision]* and Sub-Clause 20.5 *[Amicable Settlement]* shall not apply; and
 - b) The dispute may be referred directly to arbitration under Sub-Clause 20.6 *[Arbitration]*.

**APPENDIX A –
General Conditions of Dispute Board Agreement**

1. Definitions:

Each "Dispute Board Agreement" is a tripartite agreement by and between:

- a) The "Employer";
- b) The "Contractor"; and
- c) The "Member", who is defined in the Dispute Board Agreement as being:
 - (i) The sole member of the "DB" and, where this is the case, all references to the "Other Members" do not apply, or
 - (ii) One of the three persons who are jointly called the "DB" (or "Dispute Board") and, where this is the case, the other two persons are called the "Other Members".

The Employer and the Contractor have entered (or intend to enter) into a contract, which is called the "Contract" and is defined in the Dispute Board Agreement, which incorporates this Appendix. In the Dispute Board Agreement, words and expressions which are not otherwise defined shall have the meanings assigned to them in the Contract.

2. General Provisions:

Unless otherwise stated in the Dispute Board Agreement, it shall take effect on the latest of the following dates:

- a) The Commencement Date defined in the Contract;
- b) When the Employer, the Contractor and the Member have each signed the Dispute Board Agreement; or
- c) When the Employer, the Contractor and each of the Other Members (if any) have respectively each signed a dispute board agreement.

This employment of the Member is a personal appointment. At any time, the Member may give not less than 70 days' notice of resignation to the Employer and to the Contractor, and the Dispute Board Agreement shall terminate upon the expiry of this period.

3. Warranties:

The Member warrants and agrees that he/she is and shall be impartial and independent of the Employer, the Contractor and the Engineer. The Member shall promptly disclose, to each of them and to the Other Members (if any), any fact or circumstance which might appear inconsistent with his/her warranty and agreement of impartiality and independence.

When appointing the Member, the Employer and the Contractor relied upon the Member's representations that he/she is:

- a) Experienced in the work which the Contractor is to carry out under the Contract;
- b) Experienced in the interpretation of contract documentation; and
- c) Fluent in the language for communications defined in the Contract.

4. General Obligations of the Member:

The Member shall:

- a) Have no interest financial or otherwise in the Employer, the Contractor or Engineer, nor any financial interest in the Contract except for payment under the Dispute Board Agreement;

- b) Not previously have been employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except in such circumstances as were disclosed in writing to the Employer and the Contractor before they signed the Dispute Board Agreement;
- c) Have disclosed in writing to the Employer, the Contractor and the Other Members (if any), before entering into the Dispute Board Agreement and to his/her best knowledge and recollection, any professional or personal relationships with any director, officer or employee of the Employer, the Contractor or the Engineer, and any previous involvement in the overall project of which the Contract forms part;
- d) Not, for the duration of the Dispute Board Agreement, be employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except as may be agreed in writing by the Employer, the Contractor and the Other Members (if any);
- e) Comply with the annexed procedural rules and with Sub-Clause 20.4 of the Conditions of Contract;
- f) Not give advice to the Employer, the Contractor, the Employer's Personnel or the Contractor's Personnel concerning the conduct of the Contract, other than in accordance with the annexed procedural rules;
- g) Not while a Member enter into discussions or make any agreement with the Employer, the Contractor or the Engineer regarding employment by any of them, whether as a consultant or otherwise, after ceasing to act under the Dispute Board Agreement;
- h) Ensure his/her availability for all Site visits and hearings as are necessary;
- i) Become conversant with the Contract and with the progress of the Works (and of any other parts of the project of which the Contract forms part) by studying all documents received which shall be maintained in a current working file;
- j) Treat the details of the Contract and all the DB's activities and hearings as private and confidential, and not publish or disclose them without the prior written consent of the Employer, the Contractor and the Other Members (if any); and
- k) Be available to give advice and opinions, on any matter relevant to the Contract when requested by both the Employer and the Contractor, subject to the agreement of the Other Members (if any).

5. General Obligations of the Employer and the Contractor:

The Member regarding the Contract, otherwise than in the normal course of the DB's activities under the Contract and the Dispute Board Agreement. The Employer and the Contractor shall be responsible for compliance with this provision, by the Employer's Personnel and the Contractor's Personnel respectively.

The Employer and the Contractor undertake to each other and to the Member that the Member shall not, except as otherwise agreed in writing by the Employer, the Contractor, the Member and the Other Members (if any):

- a) Be appointed as an arbitrator in any arbitration under the Contract;
- b) Be called as a witness to give evidence concerning any dispute before arbitrator(s) appointed for any arbitration under the Contract; or
- c) Be liable for any claims for anything done or omitted in the discharge or purported discharge of the Member's functions, unless the act or omission is shown to have been in bad faith.

The Employer and the Contractor hereby jointly and severally indemnify and hold the Member harmless against and from claims from which he is relieved from liability under the preceding paragraph.

Whenever the Employer or the Contractor refers a dispute to the DB under Sub-Clause 20.4 of the Conditions of Contract, which will require the Member to make a Site visit and attend a hearing, the Employer or the Contractor shall provide appropriate security for a sum equivalent to the reasonable expenses to be incurred by the Member. No account shall be taken of any other payments due or paid to the Member.

6. Payment:

The Member shall be paid as follows, in the currency named in the Dispute Board Agreement:

- a) A retainer fee per calendar month, which shall be considered as payment in full for:
 - (i) Being available on 28 days' notice for all Site visits and hearings;
 - (ii) Becoming and remaining conversant with all project developments and maintaining relevant files;
 - (iii) All office and overhead expenses including secretarial services, photocopying and office supplies incurred in connection with his duties; and
 - (iv) All services performed hereunder except those referred to in sub-paragraphs (b) and (c) of this Clause.

The retainer fee shall be paid with effect from the last day of the calendar month in which the Dispute Board Agreement becomes effective; until the last day of the calendar month in which the Taking-Over Certificate is issued for the whole of the Works.

With effect from the first day of the calendar month following the month in which the Taking-Over Certificate is issued for the whole of the Works, the retainer fee shall be reduced by one third. This reduced fee shall be paid until the first day of the calendar month in which the Member resigns or the Dispute Board Agreement is otherwise terminated.

- b) A daily fee which shall be considered as payment in full for:
 - (i) Each day or part of a day up to a maximum of two days' travel time in each direction for the journey between the Member's home and the Site, or another location of a meeting with the Other Members (if any);
 - (ii) Each working day on Site visits, hearings or preparing decisions; and
 - (iii) Each day spent reading submissions in preparation for a hearing;
- c) All reasonable expenses including necessary travel expenses (air fare in less than first class, hotel and subsistence and other direct travel expenses) incurred in connection with the Member's duties, as well as the cost of telephone calls, courier charges, and faxes: a receipt shall be required for each item in excess of five percent of the daily fee referred to in sub-paragraph (b) of this Clause;
- d) Any taxes properly levied in the Country on payments made to the Member (unless a national or permanent resident of the Country) under this Clause 6.

The retainer and daily fees shall be as specified in the Dispute Board Agreement. Unless it specifies otherwise, these fees shall remain fixed for the first 24 calendar months, and shall thereafter be adjusted by agreement between the Employer, the Contractor and the Member, at each anniversary of the date on which the Dispute Board Agreement became effective.

If the parties fail to agree on the retainer fee or the daily fee, the appointing entity or official named in the Contract Data shall determine the amount of the fees to be used.

The Member shall submit invoices for payment of the monthly retainer and air fares quarterly in advance. Invoices for other expenses and for daily fees shall be submitted following the conclusion of a Site visit or hearing. All invoices shall be accompanied by a brief description of activities performed during the relevant period and shall be addressed to the Contractor.

The Contractor shall pay each of the Member's invoices in full within 56 calendar days after receiving each invoice and shall apply to the Employer (in the Statements under the Contract) for reimbursement of one-half of the amounts of these invoices. The Employer shall then pay the Contractor in accordance with the Contract.

If the Contractor fails to pay to the Member the amount to which he/she is entitled under the Dispute Board Agreement, the Employer shall pay the amount due to the Member and any other amount which may be required to maintain the operation of the DB; and without prejudice to the Employer's rights or remedies. In addition to all other rights arising from this default, the Employer shall be entitled to reimbursement of

all sums paid in excess of one-half of these payments, plus all costs of recovering these sums and financing charges calculated at the rate specified in Sub-Clause 14.8 of the Conditions of Contract.

If the Member does not receive payment of the amount due within 70 days after submitting a valid invoice, the Member may (i) suspend his/her services (without notice) until the payment is received, and/or (ii) resign his/her appointment by giving notice under Clause 7.

7. Termination:

At any time: (i) the Employer and the Contractor may jointly terminate the Dispute Board Agreement by giving 42 days' notice to the Member; or (ii) the Member may resign as provided for in Clause 2.

If the Member fails to comply with the Dispute Board Agreement, the Employer and the Contractor may, without prejudice to their other rights, terminate it by notice to the Member. The notice shall take effect when received by the Member.

If the Employer or the Contractor fails to comply with the Dispute Board Agreement, the Member may, without prejudice to his other rights, terminate it by notice to the Employer and the Contractor. The notice shall take effect when received by them both.

Any such notice, resignation and termination shall be final and binding on the Employer, the Contractor and the Member. However, a notice by the Employer or the Contractor, but not by both, shall be of no effect.

8. Default of the Member:

If the Member fails to comply with any of his obligations under Clause 4 (a) - (d) above, he shall not be entitled to any fees or expenses hereunder and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses received by the Member and the Other Members (if any), for proceedings or decisions (if any) of the DB which are rendered void or ineffective by the said failure to comply.

If the Member fails to comply with any of his obligations under Clause 4 (e) - (k) above, he shall not be entitled to any fees or expenses hereunder from the date and to the extent of the non-compliance and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses already received by the Member, for proceedings or decisions (if any) of the DB which are rendered void or ineffective by the said failure to comply.

9. Disputes:

Any dispute or claim arising out of or in connection with this Dispute Board Agreement, or the breach, termination or invalidity thereof shall be finally settled by institutional arbitration. If no other arbitration institute is agreed, the arbitration shall be conducted under the Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with these Rules of Arbitration.

PROCEDURAL RULES

1. Unless otherwise agreed by the Employer and the Contractor, the DB shall visit the Site at intervals of not more than 140 days, including times of critical construction events, at the request of either the Employer or the Contractor. Unless otherwise agreed by the Employer, the Contractor and the DB, the period between consecutive visits shall not be less than 70 days, except as required to convene a hearing as described below.
2. The timing of and agenda for each Site visit shall be as agreed jointly by the DB, the Employer and the Contractor, or in the absence of agreement, shall be decided by the DB. The purpose of Site visits is to enable the DB to become and remain acquainted with the progress of the Works and of any actual or potential problems or claims, and, as far as reasonable, to endeavour to prevent potential problems or claims from becoming disputes.
3. Site visits shall be attended by the Employer, the Contractor and the Engineer and shall be coordinated by the Employer in co-operation with the Contractor. The Employer shall ensure the provision of appropriate conference facilities and secretarial and copying services. At the conclusion of each Site visit and before leaving the site, the DB shall prepare a report on its activities during the visit and shall send copies to the Employer and the Contractor.
4. The Employer and the Contractor shall furnish to the DB one copy of all documents which the DB may request, including Contract documents, progress reports, variation instructions, certificates and other documents pertinent to the performance of the Contract. All communications between the DB and the Employer or the Contractor shall be copied to the other Party. If the DB comprises three persons, the Employer and the Contractor shall send copies of these requested documents and these communications to each of these persons.
5. If any dispute is referred to the DB in accordance with Sub-Clause 20.4 of the Conditions of Contract, the DB shall proceed in accordance with Sub-Clause 20.4 and these Rules. Subject to the time allowed to give notice of a decision and other relevant factors, the DB shall:
 - a) Act fairly and impartially as between the Employer and the Contractor, giving each of them a reasonable opportunity of putting his case and responding to the other's case; and
 - b) Adopt procedures suitable to the dispute, avoiding unnecessary delay or expense.
6. The DB may conduct a hearing on the dispute, in which event it will decide on the date and place for the hearing and may request that written documentation and arguments from the Employer and the Contractor be presented to it prior to or at the hearing.
7. Except as otherwise agreed in writing by the Employer and the Contractor, the DB shall have power to adopt an inquisitorial procedure, to refuse admission to hearings or audience at hearings to any persons other than representatives of the Employer, the Contractor and the Engineer, and to proceed in the absence of any party who the DB is satisfied received notice of the hearing; but shall have discretion to decide whether and to what extent this power may be exercised.
8. The Employer and the Contractor empower the DB, among other things, to:
 - a) Establish the procedure to be applied in deciding a dispute;
 - b) Decide upon the DB's own jurisdiction, and as to the scope of any dispute referred to it;
 - c) Conduct any hearing as it thinks fit, not being bound by any rules or procedures other than those contained in the Contract and these Rules;
 - d) Take the initiative in ascertaining the facts and matters required for a decision;
 - e) Make use of its own specialist knowledge, if any;
 - f) Decide upon the payment of financing charges in accordance with the Contract;
 - g) Decide upon any provisional relief such as interim or conservatory measures; and
 - h) Open up, review and revise any certificate, decision, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute.

9. The DB shall not express any opinions during any hearing concerning the merits of any arguments advanced by the Parties. Thereafter, the DB shall make and give its decision in accordance with Sub-Clause 20.4, or as otherwise agreed by the Employer and the Contractor in writing. If the DB comprises three persons:
- a) It shall convene in private after a hearing, in order to have discussions and prepare its decision;
 - b) It shall endeavour to reach a unanimous decision: if this proves impossible the applicable decision shall be made by a majority of the Members, who may require the minority Member to prepare a written report for submission to the Employer and the Contractor; and
 - c) If a Member fails to attend a meeting or hearing, or to fulfil any required function, the other two Members may nevertheless proceed to make a decision; unless:
 - (i) Either the Employer or the Contractor does not agree that they do so; or
 - (ii) The absent Member is the chairman and he/she instructs the other Members not to make a decision.

**APPENDIX B –
Corrupt and Fraudulent Practices – Environmental and Social Responsibility**

1. Corrupt and Fraudulent Practices

The Contracting Authority and the suppliers, contractors, subcontractors, consultants or subconsultants must observe the highest standard of ethics during the procurement process and performance of the contract. The Contracting Authority means the Purchaser, the Employer, the Client, as the case may be, for the procurement of goods, works, plants, consulting services or non-consulting services.

By signing the Statement of Integrity the suppliers, contractors, subcontractors, consultants or subconsultants declare that (i) “it did not engage in any practice likely to influence the contract award process to the Contracting Authority’s detriment, and that it did not and will not get involved in any anti-competitive practice”, and that (ii) “the procurement process and the performance of the contract did not and shall not give rise to any act of corruption or fraud”.

Moreover, AFD requires including in the Procurement Documents and AFD-financed contracts a provision requiring that suppliers, contractors, subcontractors, consultants or subconsultants will permit AFD to inspect their accounts and records relating to the procurement process and performance of the AFD-financed contract, and to have them audited by auditors appointed by AFD.

AFD reserves the right to take any action it deems appropriate to check that these ethics rules are observed and reserves, in particular, the rights to:

- a) Reject a proposal for a contract award if it is established that during the selection process the bidder or consultant that is recommended for the award has been convicted of corruption, directly or by means of an agent, or has engaged in fraud or anti-competitive practices in view of being awarded the Contract;
- b) Declare misprocurement when it is established that, at any time, the Contracting Authority, the suppliers, contractors, subcontractors, consultants or subconsultants their representatives have engaged in acts of corruption, fraud or anti-competitive practices during the procurement process or performance of the contract without the Contracting Authority having taken appropriate action in due time satisfactory to AFD to remedy the situation, including by failing to inform AFD at the time they knew of such practices.

AFD defines, for the purposes of this provision, the terms set forth below as follows:

- a) Corruption of a Public Officer means:
 - The act of promising, offering or giving to a Public Officer, directly or indirectly, an undue advantage of any kind for himself or for another Person¹ or entity, for such Public Officer to act or refrain from acting in his official capacity; or
 - The act by which a Public Officer solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another Person or entity, for such Public Officer to act or refrain from acting in his official capacity.
- b) A Public Officer shall be construed as meaning:
 - Any person who holds a legislative, executive, administrative or judicial mandate (within the country of the Contracting Authority) regardless of whether that natural Person was nominated or elected, regardless of the permanent or temporary, paid or unpaid nature of the position and regardless of the hierarchical level the natural Person occupies;
 - Any other natural Person who performs a public function, including for a State institution or a State-owned company, or who provides a public service;
 - Any other natural Person defined as a Public Officer by the national laws of the country of the Contracting Authority.

¹ Means any Person whether natural or legal, firm, company, corporation, government, state or state agency or any association, or group of two or more of the foregoing (whether or not having separate legal status).

- c) Corruption of a Private Person² means:
- The act of promising, offering or giving to any Private Person, directly or indirectly, an undue advantage of any kind for himself or for another Person or entity, for such Private Person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations; or;
 - The act by which any Private Person solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another Person or entity, for such Private Person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations.
- d) Fraud means any dishonest conduct (act or omission), whether or not it constitutes a criminal offence, deliberately intended to deceive others, to intentionally conceal items, to violate or vitiate consent, to circumvent legal or regulatory requirements and/or to violate internal rules in order to obtain illegitimate profit.
- e) Anti-competitive practices mean:
- Any concerted or implied practices which have as their object or effect the prevention, restriction or distortion of competition within a marketplace, especially where they (i) limit access to the marketplace or free exercise of competition by other undertakings, (ii) prevent free, competition-driven price determination by artificially causing price increases or decreases, (iii) restrict or control production, markets, investments or technical progress; or (iv) divide up market shares or sources of supply;
 - Any abuse by one undertaking or a group of undertakings which hold a dominant position on an internal market or on a substantial part of it;
 - Any practice whereby prices are quoted or set unreasonably low, the object of which is to eliminate an undertaking or any of its products from a market or to prevent it from entering the market.

2. Environmental and Social Responsibility

In order to promote sustainable development, AFD seeks to ensure that internationally recognised environmental and social standards are complied with. Suppliers, contractors, subcontractors, consultants or subconsultants for AFD-financed contracts shall consequently undertake in the Statement of Integrity to:

- a) Comply with and ensure that all their subcontractors or subconsultants comply with international environmental and labour standards, consistent with applicable law and regulations in the country of implementation of the contract, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties;
- b) Implement environmental and social risks mitigation measures when specified in the environmental and social management plan (ESMP) provided by the Contracting Authority.

² Means any natural Person other than a Public Officer.

**APPENDIX C -
Eligibility Criteria**

Eligibility in AFD-Financed Procurement

1. Financing allocated by AFD to a Contracting Authority has been entirely untied since 1st January 2002. To the exception of any equipment or any sector which is subject to an embargo by the United Nations, the European Union or France, all goods, works, plants, consulting services and non-consulting services are eligible for AFD financing regardless of the country of origin of the supplier, contractor, subcontractor, consultant or subconsultant inputs or resources used in the implementation processes. The Contracting Authority means the Purchaser, the Employer, the Client, as the case may be, for the procurement of goods, works, plants, consulting services or non-consulting services.
2. Natural or legal Persons¹ (including all members of a joint venture or any of their suppliers, contractors, subcontractors, consultants or subconsultants) shall not be awarded an AFD-financed contract if, on the date of submission of an application, a bid or a proposal, or on the date of award of a contract, they:
 - 2.1 Are bankrupt or being wound up or ceasing their activities, are having their activities administered by the courts, have entered into receivership, or are in any analogous situation arising from a similar procedure;
 - 2.2 Have been:
 - a) convicted, within the past five years by a court decision, which has the force of res judicata in the country where the contract is implemented, of fraud, corruption or of any other offense committed during a procurement process or performance of a contract, unless they provide supporting information together with their Statement of Integrity (Form available as Appendix to the Application, Bid or Proposal Submission Form) which shows that this conviction is not relevant in the context of the Contract;
 - b) subject to an administrative sanction within the past five years by the European Union or by the competent authorities of the country where they are constituted, for fraud, corruption or for any other offense committed during a procurement process or performance of a contract, unless they provide supporting information together with their Statement of Integrity (Form available as Appendix to the Application, Bid or Proposal Submission Form) which shows that this sanction is not relevant in the context of the Contract;
 - c) convicted, within the past five years by a court decision, which has the force of res judicata, of fraud, corruption or of any other offense committed during the procurement process or performance of an AFD-financed contract;
 - 2.3 Are listed for financial sanctions by the United Nations, the European Union and/or France for the purposes of fight-against-terrorist financing or threat to international peace and security;
 - 2.4 Have been subject within the past five years to a contract termination fully settled against them for significant or persistent failure to comply with their contractual obligations during contract performance, unless this termination was challenged and dispute resolution is still pending or has not confirmed a full settlement against them;
 - 2.5 Have not fulfilled their fiscal obligations regarding payments of taxes in accordance with the legal provisions of either the country where they are constituted or the Contracting Authority's country;
 - 2.6 Are subject to an exclusion decision of the World Bank and are listed on the website <http://www.worldbank.org/debarr>, unless they provide supporting information together with their Statement of Integrity (Form available as Appendix to the Application, Bid or Proposal Submission Form) which shows that this exclusion is not relevant in the context of the Contract;

¹ Means any Person whether natural or legal, firm, company, corporation, government, state or state agency or any association, or group of two or more of the foregoing (whether or not having separate legal status).

- 2.7 Have created false documents or committed misrepresentation in documentation requested by the Contracting Authority as part of the procurement process of the Contract.
3. State-owned entities may compete only if they can establish that they (i) are legally and financially autonomous, and (ii) operate under commercial law. To be eligible, a state-owned entity shall establish to AFD's satisfaction, through all relevant documents, including its Charter and other information AFD may request, that it: (i) is a legal entity separate from their state (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to their state, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt.

Section IX – Particular Conditions (PC)

The following Particular Conditions shall supplement the GC. Whenever there is a conflict, the provisions herein shall prevail over those in the GC.

Part A – Contract Data

Conditions	Sub-Clause	Data
Employer's name and address	1.1.2.2 & 1.3	The Chief Executive Officer, Athi Water Works Development Agency, Athi Water Plaza, Muthaiga North Road, Off Kiambu Road P.O. Box 45283-00100 Nairobi, Kenya. Tel: 254 020 2724292/3 Fax: 254 020 27224295 Email: info@awwda.go.ke
Engineer's name and address	1.1.2.4 & 1.3	Director Infrastructure Development Athi Water Works Development Agency, Athi Water Plaza, Muthaiga North Road, Off Kiambu Road P.O. Box 45283-00100 Nairobi, Kenya. Tel: 254 020 2724292/3 Fax: 254 020 27224295 Email: info@awwda.go.ke
Bank's Name	1.1.2.11	Agence Française de Développement ("AFD"), being specified that, according to French laws and regulations, AFD is not a bank but a Specialized Financial Institution ("Institution Financière Spécialisée").
Borrower's Name	1.1.2.12	The "Borrower" is the Employer
Time for Completion of the Works	1.1.3.3	18 months
Defects Notification Period	1.1.3.7	365 days.
Sections	1.1.5.6	Refer to Table of Work Sections
ESHS Specifications	1.1.6.11	ESHS Specifications are applicable: Yes <input checked="" type="checkbox"/> / No <input type="checkbox"/> [An AFD agreement is required to check "No".]
Exceptionally Adverse Climatic Conditions	1.1.6.15	<i>Additional Sub-Clause</i> "Exceptionally Adverse Climatic Conditions" means:: <ul style="list-style-type: none"> – Precipitation- above 200mm Monthly average – Day time temperatures- below 20°C (68°F) – Day time Humidity- 77% Data shall be verified by an independent body such as Kenya Meteorological department
Governing Law	1.4	Laws of the Government of Kenya Contractor to comply with all Laws of Kenya including all Statutory Requirements with regards to Operations in Kenya as a Contractor.

Conditions	Sub-Clause	Data
Ruling Language	1.4	English
Language for Communications	1.4	English
Time for Access to the Site	2.1	No later than the final Commencement Date. The Employer shall give the Contractor right of access to the Site upon submission of evidence that the insurances specified in PCC 18 have been effected.
Engineer's Duties and Authority	3.1	The Engineer shall obtain specific approval of the Employer before taking the following actions: <ul style="list-style-type: none"> ▪ Issuing any instruction resulting in substantial changes to the Works, or an increase of the Accepted Contract Amount and/or an extension of the Time for Completion; ▪ Proceeding to Determination under Sub-Clause 3.5;
Contractor's General Obligations	4.1	The Contractor shall provide the following documents as part of the Contract and as specified in the Specification <ul style="list-style-type: none"> ▪ Shop drawings to be approved by the Engineer prior to starting the Works; ▪ As-built" drawings to be approved by the Engineer prior to taking over of the Works; and ▪ Operation and maintenance manuals.
Performance Security	4.2	The performance security will be in the form of a <i>demand guarantee (in form of unconditional bank guarantee) in the amount(s) 10 per cent</i> of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount. If the Unconditional Guarantee is issued by a bank located outside the Employer's Country, the issuing bank shall have a correspondent bank located in the Employer's Country to make it enforceable.
Subcontractors	4.4	Direct payment of Subcontractors is allowed: <i>Yes</i> When a Subcontractor is appointed after Contract signing, its approval by the Employer and the agreed terms of direct payment require to be recorded in an amendment or addendum to the Contract.
Progress Reports	4.21	Frequency of progress reports: <i>Monthly</i>
Normal Working Hours	6.5	As per the Laws of Kenya
Commencement of Works	8.1	The Commencement Date shall be: <i>As instructed by the Engineer in the Engineer's order to commence works</i>
Delay Damages for the Works	8.7 & 14.15(b)	0.01 % of the Contract Price per day.

Conditions	Sub-Clause	Data
Maximum Amount of Delay Damages	8.7	7.5% of the final Contract Price
Percentage for Adjustment of Provisional Sums	13.5(b)(ii)	5 %
Adjustments for Changes in Cost	13.8	Not Applicable

Conditions	Sub-Clause	Data
Contract Price	14.1	The Contract Price is an Admeasurement Contract Price (unit price contract)
	14.1(e)	Item (e) of Sub-Clause 14.1 - Part B of the PC regarding the exemption of import duties and taxes is applicable: <i>No</i>
Total Advance Payment	14.2	20% Percentage of the Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable upon submission of an unconditional bank Guarantee of similar amounts and currency
Repayment Amortization Rate of Advance Payment	14.2(b)	The repayment amortization rate (%) shall not be less than 15% of the Amount of Advance Payment
Percentage of Retention	14.3	10% of each IPC amount
Limit of Retention Money	14.3	10% of the Accepted Contract Amount
Plant and Materials	14.5(b)(i)	<i>If Sub-Clause 14.5 applies:</i> Plant and Materials for payment when shipped en route to the Site (Free on Board): None
	14.5(c)(i)	Plant and Materials for payment when delivered to the Site: 70%
Minimum Amount of Interim Payment Certificates	14.6	5% of the Accepted Contract Amount
Payment	14.7	Payment to the Contractor of the amounts due in each currency shall be made into the following bank account: Bank account details as given at the time of contract signing.
Publishing source of commercial interest rates for financial charges in case of delayed payment	14.8	The interest rate for payments in local currency is 1% above the Central Bank of Kenya 90 day treasury bill Rate.
		The interest rate for payments in local currency is as per GC 14.8.
Limitation of Liability	17.6	The total liability of the Contractor to the Employer shall not exceed the Accepted Contract Amount multiplied by 1.5
Periods for submission of insurance: a) Evidence of insurance b) Relevant policies	18.1	14 days
		28 days
Minimum amount of third party insurance per occurrence	18.3	KShs 2,000,000.00
Date by which the DB shall be appointed	20.2	Adhoc when required
The DB shall be comprised of:	20.2	Three Members

Conditions	Sub-Clause	Data
List of potential DB sole members	20.2	N/A
Appointment (if not agreed) to be made by:	20.3	<i>Chartered Institute of arbitrators of Kenya</i>
Arbitration rules	20.6	<i>Arbitration rules of International Chamber of Commerce</i>
Place of arbitration	20.6	<i>To be inserted during contract negotiations</i>

Table: Summary of Sections

Section Name/Description (Sub-Clause 1.1.5.6)	Time for Completion (Sub-Clause 1.1.3.3)	Damages for Delay (Sub-Clause 8.7)
Mji wa Huruma Works	<i>(Bidder to Fill)</i>	As detailed in PCC
Matopeni Works	<i>(Bidder to Fill)</i>	
Mariguini Works	<i>(Bidder to Fill)</i>	
Kiambiu Works	<i>(Bidder to Fill)</i>	
Kamola Works	<i>(Bidder to Fill)</i>	

Note: The Contractor may complete and hand over each of the above Sections of the Works separately.

Part B – Specific Provisions

Conditions	Sub-Clause	Specific provisions
Defects Notification Period	1.1.3.7	<i>Add, at the end of the Sub-Clause "or taken over under Sub-Clause 10.2 [Taking Over of Parts of the Works]"</i>
Site	1.1.6.7	<i>This Sub-Clause is deleted in its entirety and replaced by:</i> "Site" means the places where the Permanent Works are to be executed and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.
Variation	1.1.6.9	<i>This Sub-Clause is deleted in its entirety and replaced by:</i> "Variation" means any change to Specification or the Drawings or the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments].
ESHS Specifications	1.1.6.11	<i>Additional Sub-Clause:</i> "ESHS Specifications" means the document entitled environmental, social, health and safety specifications, as included in the Specification, and any additions and modifications to it in accordance with the Contract. Such document specifies the environmental, social, health and safety obligations of the Contractor.
Project Area	1.1.6.12	<i>Additional Sub-Clause:</i> "Project Area" has the meaning defined in the ESHS Specifications.
Worksite - ESMP	1.1.6.13	<i>Additional Sub-Clause:</i> "Worksite – ESMP" stands for Worksite Environmental and Social Management Plan, and has the meaning defined in the ESHS Specifications.
EPP	1.1.6.14	<i>Additional Sub-Clause:</i> "EPP" stands for Environmental Protection Plan, and has the meaning defined in the ESHS Specifications.
Communications	1.3	<i>Add the following at the end of item (a), after "Contract Data" and before ";":</i> "In case of electronic transmission, these communications shall be in the form of an un-editable record attached to an electronic mail, such as a PDF document for instance, and any other communication transmitted in a different manner, such as the email body text, shall not be construed as communication under the Contract." <i>Before the last paragraph, add the following sentence:</i> "Delivery of communications, by any authorized method of transmission, shall be made against receipt."
Priority of Documents	1.5	<i>Add the following at the end of the Sub-Clause:</i> "The Contractor shall be obliged to comply with the clarification or instruction of the Engineer without any

Conditions	Sub-Clause	Specific provisions
		adjustment to the Contract Price and/or to the Time for Completion."
Contract Agreement	1.6	<p><i>This Sub-Clause is deleted in its entirety and</i></p> <p><i>This Sub-Clause is deleted in its entirety and replaced by:</i></p> <p>"The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, or within 28 days after the Employer receives the Performance Security, whichever is later. The Contract Agreement shall be based upon the form annexed to the Particular Conditions. The Contract Agreement shall include any annexed memoranda comprising agreements between and signed by both Parties. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Contractor.</p> <p>This Contract constitutes the entire agreement between the Parties in connection with its subject matter and supersedes all prior representations, communications, negotiations and undertakings concerning the subject matter of this Contract.</p> <p>The Parties acknowledge and agree that by entering into this Contract they do not rely on any statement, representation, assurance or warranty of any person (whether a party to the Contract or not or whether made in writing or not) other than as expressly set out in the Contract."</p>
Assignment	1.7	<p><i>This Sub-Clause is deleted in its entirety and replaced by:</i></p> <p>"The Contractor shall not assign the whole or any part of the Contract or any benefit or interest in or under the Contract without the prior written consent of the Employer. The Employer shall be entitled to assign this Contract or any part of it to any person, for which purpose it shall not require the consent of the Contractor."</p>
Care and Supply of Document	1.8	<p><i>Delete the 2nd sentence of the 2nd paragraph in its entirety, and replace it by:</i></p> <p>"The Contractor shall supply to the Engineer each of the Contractor's Documents in one (1) soft (paper) copy and two (2) hard (digital) copies "</p>
Inspections and Audit by AFD	1.15	<p><i>This Sub-Clause is deleted in its entirety and replaced by:</i></p> <p>"The Contractor shall permit, and shall cause its agents (whether declared or not), subcontractors, subconsultants, service providers, or suppliers and any personnel thereof, to permit, AFD and/or persons appointed by AFD to inspect the Site and all accounts and records relating to the performance of the Contract and the submission of the Bid, and to have such accounts and records audited by auditors appointed by AFD if requested by AFD.</p> <p>The Contractor's attention is drawn to Sub-Clause 15.6 [Corrupt or Fraudulent Practices] which provides, inter alia, that acts intended to materially impede the exercise of AFD's inspection and audit rights provided for under Sub-</p>

Conditions	Sub-Clause	Specific provisions
		Clause 1.15 constitute a prohibited practice subject to contract termination."
Non Waiver	1.16	<p><i>Additional Sub-Clause:</i></p> <p>"Except as otherwise specifically provided for in the Contract, no failure or delay by either Party in exercising any right or remedy provided by the Laws or pursuant to the Contract will impair such right or remedy or operate or be construed as a waiver or variation of it or preclude its exercise at any subsequent time and no single or partial exercise of any such right or remedy will preclude any other or further exercise of it or the exercise of any other right or remedy."</p>
Survival of Obligations	1.17	<p><i>Additional Sub-Clause:</i></p> <p>"Obligations under the Contract, which by their nature would continue beyond the termination or expiration hereof, including, by way of illustration only and not limitation, those in Clause 1 [<i>General Provisions</i>], Clause 11 [<i>Defects Liability</i>], Clause 17 [<i>Indemnities</i>], Clause 18 [<i>Insurance</i>], and Clause 20 [<i>Claims and Disputes</i>] shall survive the termination or expiration of the Contract."</p>
Severability	1.18	<p><i>Additional Sub-Clause:</i></p> <p>"The Parties expressly declare that each section, clause or paragraph of this Contract will be considered separate in terms of its validity and enforceability. Therefore, if, for any reason, any provision of this Contract is declared null and void, or if a ruling states that any part of it runs contrary to governing law, said declaration will in no way affect the validity and enforceability of the other stipulations, which may be construed, understood and executed independently of the portion declared null and void. Thus, every part of this Contract not declared null and void in any way will be valid, enforceable and binding on the Parties.</p> <p>Likewise, if any provision of this Contract or its application to any individual or company or in a given circumstance is declared null and void, or if its enforceability is in any way limited, the other provisions herein, as well as also the application of the doubtful provision to other people or in other circumstances, will not be affected thereby, and they will be applied to the extent permitted by governing law.</p> <p>Notwithstanding the above, the Parties undertake to negotiate in good faith the terms of a mutually satisfactory provision to replace any clause that may be declared null and void or whose enforceability is in any way restricted."</p>
No Partnership or Agency	1.19	<p><i>Additional Sub-Clause:</i></p> <p>"Nothing contained in this Contract shall be construed to either constitute a partnership or constitute either Party an agent or employee of the other Party."</p>
Amendment	1.20	<i>Additional Sub-Clause:</i>

Conditions	Sub-Clause	Specific provisions
		"This Contract may not be altered, varied, changed, supplemented or amended except by a written instrument duly signed and executed by the Parties and expressly stated to be an amendment to this Contract. For the sake of clarity, any Variation under Clause 13 [<i>Variations and Adjustments</i>] which is leading to a substantial change to the Works, an increase of the Contract Price and/or to an extension of the Time for Completion shall be reflected in an amendment to this Contract."
Right of Access to the Site	2.1	<p><i>Insert the following in the 1st paragraph, after the 1st sentence and before the 2nd sentence:</i></p> <p>"This Employer is however under no obligation to give the Contractor right of access to, and possession of, any other area located outside the boundaries of the Site, even if such other area is located within the Project Area. Access to, and possession of, such any other area is fully at the Contractor's risk."</p> <p><i>Add at the end of the 1st paragraph, after "received", the following:</i></p> <p>"and until such time, whichever is the later, the Contractor has provided written evidence in the form of a broker's or an insurer's certificate that all insurances to be taken-out by the Contractor pursuant to the Contract have been duly put in place and are in full force and effect."</p>
Employer's Claims	2.5	<i>Delete the 2nd sentence of the 2nd paragraph in its entirety.</i>
Delegation by the Engineer	3.2	Delegation by the Engineer is subject to the provisions of the contract between the Employer and the Engineer.
Instructions of the Engineer	3.3	<p><i>Remove the entire text from "If the Engineer or a delegated assistant" to "(as the case may be)", and replace it by the following:</i></p> <p>"Verbal instructions given on Site shall only be binding on the Contractor if recorded by the Engineer or his delegated assistant (as the case may be) in the on-site log book defined under Sub-Clause 4.25."</p> <p><i>Add the following at the end of the Sub-Clause:</i></p> <p>"If such an instruction would in the opinion of the Contractor, acting reasonably:</p> <ul style="list-style-type: none"> (i) Result in possible adverse consequences for, including but not limited to, the quality of the Works and/or the Time for Completion; and/or (ii) Otherwise result in any increase in the Contract Price then: <p>the Contractor shall immediately notify the Employer and the Engineer of the same in writing, and in any event before the Contractor implements the instruction. Following the issue of such notice, the Contractor shall implement the instruction given by the Engineer unless instructed otherwise by the Engineer.</p>

Conditions	Sub-Clause	Specific provisions
		Under any circumstances, failure by the Contractor to notify the Engineer in accordance with Sub-Clause 20.1 [<i>Contractor's Claims</i>] shall mean that any performance of the Works relating thereto shall be deemed to be solely at the Contractor's risk and cost. The Contractor shall not have the right thereafter to rely on such circumstances when a claim is made against him by the Employer for any failure by the Contractor to perform the Works in accordance with the requirements of the Contract or by him to the Employer for any relief (which includes, without limitation, any claim for any extension to the Time for Completion and/or for any additional payment) in accordance with the Contract."
Replacement of the Engineer	3.4	<i>Not applicable.</i>
Contractor's General Obligations	4.1	<p><i>Insert the following at the end of the 2nd paragraph:</i></p> <p>"The Contractor commits to meet the AFD's eligibility criteria as listed under Appendix C to the General Conditions."</p> <p><i>Insert the following at the end of the Sub-Clause:</i></p> <p>"If an unsolicited technical alternative, proposed by the Contractor, and approved by the Employer, becomes incorporated under the Contract and includes a change in the design of part or all of the Works, then unless otherwise agreed by both Parties: (i) the Bidder who becomes the Contractor shall design this part, (ii) sub-paragraphs (a) to (d) of the Conditions of Contract Sub-Clause 4.1 shall apply, and (iii) Contract price for this part of the Works shall be a lump sum price."</p>
Contractor's Representative	4.3	<p><i>Delete the 3rd paragraph in its entirety and replace it by the following:</i></p> <p>"The Contractor shall not, without the prior consent of the Employer, revoke the appointment of the Contractor's Representative or appoint a replacement."</p>

Conditions	Sub-Clause	Specific provisions
Subcontractors	4.4	<p><i>Insert the following at the beginning of the Sub-Clause:</i></p> <p>"The Contractor shall only employ Subcontractors meeting the AFD's eligibility criteria as listed under Appendix C to the General Conditions.</p> <p>In case of failure by the Contractor to comply with this requirement, and irrespective of whether the Engineer has given prior consent under this Sub-Clause, the Contractor shall forthwith cease any business dealing with any ineligible Subcontractor and replace such Subcontractor by an eligible one, all at the Contractor's risk and cost. Otherwise, the Employer, at his own election, shall be entitled to terminate the Contract in accordance with Sub-Clause 15.2 [Termination by Employer]."</p> <p><i>In item (b), replace "Engineer" by "Employer".</i></p> <p><i>If the option for direct payment of Subcontractors has been selected in Sub-Clause 4.4 of the PC, then:</i></p> <p>A Subcontractor named in the Contract or designated after Contract signing with the Engineer's consent may be paid directly by the Employer for work done, and/or supplies or services provided by the said Subcontractor for which the Contractor has not been already paid, if (a) the Employer and the relevant authorities whose approval of the Contract is required so agree, or (b) the Employer's country laws and regulations so require.</p> <p>In such case, the Contractor shall furnish a statement to the Engineer, prior to any commencement of the subcontracted work including the following:</p> <ul style="list-style-type: none"> a) The nature and scope of work or activities intended to be subcontracted; b) The name, registration information and address of the proposed Subcontractor; and c) The payment terms and conditions intended in the subcontract agreement, and the intended amount of the subcontract, including the date of establishment of the price, and if applicable, the modalities for price variation, advance payment, progress payment mechanism, price reductions, bonuses and penalties. <p>Within one (1) month of their receipt the Engineer shall either accept all supporting documents relating to direct payment or reject them in full or in part with justification to the Contractor, failing which the Engineer shall be deemed to have accepted all supporting documents which the Engineer did not explicitly rejected.</p>
Safety Procedures	4.8	<p><i>Add the following at the end of the Sub-Clause:</i></p> <p>"These provisions are complemented by those listed under the ESHS Specifications which the Contractor must ensure full compliance with."</p>
Protection of the Environment	4.18	<p><i>Add the following after the last paragraph:</i></p>

Conditions	Sub-Clause	Specific provisions
		"These provisions are complemented by those listed under the ESHS Specifications which the Contractor must ensure full compliance with."
Progress Reports	4.21	<p><i>At the end of item (h), add the following:</i></p> <p>"Details and dates relating to the personnel deployed through the design and execution to the completion of the Works shall be included in those comparisons."</p> <p><i>Add the following new item at the end of the Sub-Clause:</i></p> <p>"(i) matters requested under the ESHS Specifications."</p>
On-Site Log Book	4.25	<p><i>Additional Sub-Clause:</i></p> <p>"The Contractor shall maintain on Site a log book, in a form approved by the Engineer and which shall integrate the fields required in the Specification. It will be used to record the Contractor's activities on a daily basis, and any instruction from the Engineer given on Site. The Employer's Personnel shall have the right of access to this document at all times, and one copy of each daily record shall be promptly provided by the Contractor to the Engineer."</p>
Facilities for Staff and Labour	6.6	<p><i>The last paragraph is deleted in its entirety and replaced by the following:</i></p> <p>"The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the Site, except with the prior and express Employer's consent. The Employer and/or the Engineer may inspect the living quarters from time to time in order to verify their compliance with the Laws and the Contract. The Contractor shall accordingly grant the Employer and/or the Engineer full access to the living quarters as and when they require."</p>
Health and Safety	6.7	<p><i>Add the following at the end of the Sub-Clause:</i></p> <p>"These provisions are complemented by those listed under the ESHS Specifications which the Contractor must ensure full compliance with."</p>
Inspection	7.3	<p><i>In the first sentence of the last paragraph, add:</i></p> <p>", in accordance with the Specification," <i>after</i> "notice to the Engineer," <i>and before</i> "whenever"</p> <p><i>In the last sentence of the last paragraph:</i></p> <ul style="list-style-type: none"> – Add "within the prescribed period" <i>after</i> "notice", <i>and</i> – Add "risk and" <i>before</i> "cost".
Testing	7.4	<p><i>Add the following at the end of the 2nd paragraph:</i></p> <p>"The Contractor shall carry out such further tests as may be required under the applicable Laws and as may be required by the relevant legally constituted public authorities in the Country in order for them to approve the completed Works. Any tests required by the applicable Laws or legally</p>

Conditions	Sub-Clause	Specific provisions
		<p>constituted authorities are deemed never to be varied or additional tests and are to be carried out by the Contractor at his risk and expense."</p> <p><i>In the 4th paragraph, replace "not less than 24 hours' notice" by "24 hours' notice, unless a longer period is indicated in the Specifications."</i></p>
Commencement of Works	8.1	<p><i>Insert the following after "Sub-Clause 16.2 [Termination by contractor]" and before ".":</i></p> <p>"unless the Contractor has caused, or contributed in any respect to, any non-fulfilment of one or all of these precedent conditions."</p> <p><i>Add the following at the end of the Sub-Clause:</i></p> <p>"As defined in the ESHS Specifications (if any), no physical work may commence on any Project Area until such time the Contractor has prepared and submitted to the Engineer the Worksite - ESMP, and the annexed EPP corresponding to a Project Area, and the Engineer has approved those."</p>
Extension of Time for Completion	8.4	<p><i>Replace the first paragraph by the following:</i></p> <p>"The Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that any of the following causes affect his ability to meet the Time for Completion:"</p> <p><i>Add the following at the end of the Sub-Clause:</i></p> <p>"However the Contractor's entitlement to an extension of time shall be reduced if and to the extent that the Contractor's failure to use all reasonable endeavours to mitigate any such delay has contributed to the delay.</p> <p>Any extension of Time for Completion granted to the Contractor shall, except where the Contractor is entitled to an increase in the Contract Price in accordance with other provisions of the Contract, be deemed to be full compensation and satisfaction for any loss or damage sustained or to be sustained by the Contractor in respect of the matter or thing in connection with which such extension shall have been granted."</p>
Suspension of Work	8.8	<p><i>Add the following after the last sentence of the Sub-Clause:</i></p> <p>"As an example, and without limitation to other possible causes, any suspension of work caused by any failure from the Contractor to comply with the obligations stated:</p> <ul style="list-style-type: none"> – under the ESHS Specifications (if any), in the event of a level 3 non-compliance; – under Sub-Clause 4.8 as to safety procedures; – under Sub-Clause 4.9 as to the quality assurance; – under Sub-Clause 4.18 as to the protection of the environment; or

Conditions	Sub-Clause	Specific provisions
		– under Sub-Clause 6.7 as to health and safety; shall be considered as cause of suspension which is the responsibility of the Contractor."
Delayed Tests	9.2	<i>In the 2nd paragraph, add the following in between "21 days" and "after":</i> ", or any other period instructed by the Engineer in accordance with and taking due regard of the Contract," <i>In the 3rd paragraph, add the following in between "21 days" and ",":</i> ", or any other period instructed by the Engineer under the former paragraph,"
Failure to Pass Tests on Completion	9.4	<i>Add the following item d) after item c):</i> "d) instruct the Contractor to carry out any remedial work, as provided for in Sub-Clause 7.6 [Remedial Work]"
Taking Over of Parts of the Works	10.2	<i>Add the following at the end of the 3rd paragraph:</i> "For the sake of clarity, the Defect Notification Period of a part of the Works which has been taken over under this Sub-Clause will expire when the Defect Notification Period of the Works as a whole, or of the Section to which the part is related, as the case may be, will expire. It will then typically be longer than the latter."
Works to be Measured	12.1	<i>If the option "full Lump Sum" has been selected in Sub-Clause 14.1 of these Particular Conditions, then:</i> Clause 12 is not applicable. <i>If the option "a mix of Lump Sum Price Component and Admeasurement Component" has been selected in Sub-Clause 14.1 of these Particular Conditions, replace all text before item (a) in the Sub-Clause by the following:</i> "The Admeasurement Component of the Works shall be measured, and valued for payment, in accordance with this Clause. The Contractor shall show in each application under Sub-Clauses 14.3 [Application for Interim Payment Certificates], 14.10 [Statement on Completion] and 14.11 [Application for Final Payment Certificate] the quantities and other particulars detailing the amounts which he considers to be entitled under the Contract. Whenever the Engineer requires any part of the Admeasurement Component of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:"
Right to Vary	13.1	<i>Add the following sentence at the end of the first paragraph:</i> "Variations shall be strictly limited to what is directly related to and necessary for the Permanent Works, and to what falls under the skills, experience and trades of the Contractor."

Conditions	Sub-Clause	Specific provisions
Provisional Sums	13.5	<p><i>Add the following at the end of this Sub Clause:</i></p> <p>"As an exception to the above, the Provisional Sum for the cost of the DB, if any, shall be used to pay the Contractor of the Employer's one-half share of the invoices of the DB for its fees and expenses, in accordance with Clause 20 [Claims, Disputes and Arbitration]. No prior instruction of the Engineer shall be required with respect to the work of the DB. The Contractor shall produce the DB invoices and satisfactory evidence of having paid the entirety of such invoices as part of the substantiation of those Statements submitted under Sub-Clause 14.3 [Application for Interim Payment Certificates]. The Engineer's certification of such Statements shall be based upon such invoices and such evidence of their payment by the Contractor. No sum for Contractor's overhead charges and profit shall apply in addition to the DB invoices amounts."</p>
Adjustments for Changes in Legislation	13.7	<p><i>Add the following paragraph at the end of the Sub-Clause:</i></p> <p>"If the Contractor benefits or will benefit from reduced Cost as a result of such changes, the Engineer shall, subject to Sub-Clause 2.5 [Employer's Claims], proceed in accordance with Sub-Clause 3.5 [Determinations], to agree or determine the amount to be deducted from the Contract Price."</p>
Contract Price	14.1(d)	<p>If requested by the Engineer, the breakdown of all unit prices shall also be submitted by the Contractor within 28 days from the Commencement Date.</p>
	14.1(e)	<p><i>Add the following new item (e) at the end of the Sub-Clause:</i></p> <p>"(e) Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall be temporarily exempt from the payment of import duties and taxes upon initial importation, provided the Contractor shall post with the customs authorities at the port of entry an approved export bond or bank guarantee, valid until the Time for Completion plus six months, in an amount equal to the full import duties and taxes which would be payable on the assessed imported value of such Contractor's Equipment and spare parts, and callable in the event the Contractor's Equipment is not exported from the Country on completion of the Contract. A copy of the bond or bank guarantee endorsed by the customs authorities shall be provided by the Contractor to the Employer upon the importation of individual items of Contractor's Equipment and spare parts.</p> <p>Upon export of individual items of Contractor's Equipment or spare parts, or upon the completion of the Contract, the Contractor shall prepare, for approval by the customs authorities, an assessment of the residual value of the Contractor's Equipment and spare part to be exported, based on the depreciation scale and other criteria used by the customs authorities for such purposes under the provisions of the applicable Laws. Import duties and taxes shall be due</p>

Conditions	Sub-Clause	Specific provisions
		and payable to the customs authorities by the Contractor on (a) the difference between the initial imported value and the residual value of the Contractor's Equipment and spare parts to exported; and (b) on the initial imported value that Contractor's Equipment and spare parts remaining in the Country after completion of the Contract. Upon payment of such dues within 28 days of being invoiced, the bond or bank guarantee shall be reduced or released accordingly; otherwise the security shall be called in the full amount remaining."
Issue of Interim Payment Certificates	14.6	<i>Add the following sentence at the end of the first paragraph:</i> "The Engineer may withhold any amount up to one hundred percent (100%) of the certification at its discretion in the event that the monthly progress report to be submitted with the Contractor's Statement is missing any of the information listed in paragraphs (a) to (h) of Sub-Clause 4.21 [Progress reports]. Such withheld amounts shall be released in the Interim Payment Certificate in the month following the Contractor's submission of the missing information."
Payment	14.7	<i>Add the following sentence at the end of the Sub-Clause:</i> "The payment period defined in item (b) above can be suspended for reasons defined in the Contract, in particular in the event of an unresolved level 3 non-compliance specified in the ESHS Specifications if any. Such suspension shall not entitle the Contractor to any additional payment under Sub-Clause 14.8 [Delayed Payment] or otherwise"
Application for Final Payment Certificate	14.11	<i>In the 3rd paragraph, add "by latest 56 days after the receipt of the draft final statement", after "the Engineer shall deliver".</i> <i>In the 3rd paragraph, add the following sentence before the last sentence:</i> "Failure by the Engineer to deliver such Interim Payment Certificate within that period shall constitute a dispute."
Direct Payments to Subcontractors	14.16	<i>If the option "for direct payment of Subcontractors" has been selected in Sub-Clause 4.4 of the Particular Conditions, then:</i> "Payment for work by a Subcontractor which is entitled to be paid directly shall be made in accordance with the Contract, or an addendum or amendment thereof. When a Subcontractor is entitled to be paid directly by the Employer, the Contractor must furnish together with the Application for Interim Payment Certificates as per Sub-Clause 14.3 or the Application for Final Payment Certificate as per Sub-Clause 14.11 a statement indicating the amount to be deducted from the Payment Certificate and to be paid

		<p>directly by the Employer to the said Subcontractor, as well as the various payment currencies and amounts.</p> <p>Payments to the Subcontractor shall be made on the basis of the statement submitted by the Contractor as mentioned here above and as accepted by the Contractor.</p> <p>The aggregate amount of direct payments to a Subcontractor calculated under the conditions prevailing on the month in which the Contract Price was established (the Base Date) may not exceed the amount of the subcontract as shown in the Contract.</p> <p>The Contractor only is entitled to submit the application for Interim or Final Payment Certificate; only claims submitted or transmitted by the Contractor shall be considered.</p> <p>Upon receipt of the Contractor statement requesting direct payment of the Subcontractor, the Employer shall directly notify the Subcontractor of the date of receipt and the amounts agreed by the Contractor for direct payment.</p> <p>Direct payments of the Subcontractor must be effected within the time specified in Sub-Clause 14.7 for payment of the Contractor. A notification of the direct payment shall be issued by the Employer to the Contractor and the Subcontractor.</p> <p>Within fifteen (15) days of receipt of the documents supporting a direct payment request from the Subcontractor, the Contractor shall give its agreement or notify its refusal with justification to the Subcontractor, failing which the Contractor shall be deemed to have agreed to whichever supporting documents it did not expressly accept or reject. In case the Contractor does not notify its refusal with justification of a request for direct payment from a Subcontractor or transmit it to the Employer within the time indicated above, the Subcontractor is entitled to send a copy of the request for direct payment directly to the Employer, together with a copy of the proof of receipt of the original by the Contractor.</p> <p>Thereafter the Employer shall (i) promptly request the Contractor to submit evidence within fifteen (15) days that the Contractor rejected the said request for direct payment with justification within the time specified above, and (ii) inform the Subcontractor accordingly. If the Contractor fails to provide the requested evidence within 15 days, the Employer may directly pay the Subcontractor, up to the amount due under payment certificates claimed by the Contractor."</p>
Termination by Employer	15.2	<p><i>Add the following, after item (f) in the first paragraph:</i></p> <p>"(g) Substantially fails to comply with the ESHS Specifications."</p>
Valuation at Date of Termination	15.3	<p><i>Add the following at the end of sub-Clause, after "Contract" and before "":</i></p> <p>", except that the Engineer will be under no obligation to consult with the Contractor before making his</p>

		determination, but may consult with the Contractor at his sole discretion."
Corrupt or Fraudulent Practices	15.6	<p><i>Add the following at the end of the Sub-Clause:</i></p> <p>"In addition to the provisions of this Sub-Clause, the Contractor is also bound by the provisions found under Appendix B to the General Conditions, named "Corrupt and Fraudulent Practices Policy – Social and Environmental Responsibility."</p>
Duty to Minimize Delay / renamed as "Duty to Minimize Delay and Cost"	19.3	<i>In the first paragraph, add "and/or Cost, including but not limited to those to the Works," after "delay".</i>
Optional Termination, Payment and Release	19.6	<p><i>In the 2nd paragraph, replace "the Engineer shall determine" par the following:</i></p> <p>"the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine".</p>
Suspension or termination on the grounds of the Security of the Contractor's Personnel	19.8	<p><i>Additional Sub-Clause:</i></p> <p>"This Sub-Clause is applicable if, and only if, security specifications are included in the Contract.</p> <p>If it believes, acting reasonably, that the physical integrity of its Personnel is seriously and imminently threatened by a danger in the performance of the Contract, the Contractor may decide, without prior notice:</p> <ol style="list-style-type: none"> to demobilise its Personnel and Equipment from the area affected by the danger; and immediately suspend the performance of all or part of its obligations under the Contract that the demobilisation referred to in sub-paragraph (a) above prevents it from performing. <p>The Contractor shall notify its decision to the Employer, within a maximum period of seven (7) days therefrom, furnish proof thereof and inform the Employer of the foreseeable impact of its decision on the Contract Price and the Completion of the Works, as well as the reasonable measures proposed to mitigate these impacts.</p> <p>The Contractor shall take all reasonable steps to minimise any delay in the performance of the Contract and any Cost resulting from its decision.</p> <p>The Contractor shall continue to perform its contractual obligations that the danger does not reasonably prevent it from performing.</p> <p>If the Contractor suffers delays and/or incurs Costs as a result of its decision, the Contractor shall be entitled to obtain, in accordance with the provisions of Sub-Clause 20.1 [Contractor's Claims]:</p> <ol style="list-style-type: none"> an extension of time for such delay, if completion is or will be delayed, in accordance with Sub-Clause 8.4 [Extension of Time for Completion]; and

		<p>(ii) the payment of such Costs, including the costs of repairing and replacing Works and/or Goods damaged or destroyed by the danger, provided they are not covered by the insurance policy referred to in Sub-Clause 18.2 [<i>Insurance for Works and Contractor's Equipment</i>].</p> <p>After receiving this notification, the Engineer shall proceed in accordance with Sub-Clause 3.5 [<i>Determinations</i>] to reach an agreement or determine (1) if and (if applicable) to what extent the Contractor's decision was justified by the circumstances, and (2) the matters described in sub-paragraphs (i) and (ii) above in due proportion.</p> <p>If, due to a danger notified in accordance with the provisions of this Sub-clause, the completion of most of the Works is prevented for a continuous period of eighty four (84) days or for multiple periods exceeding one hundred and forty (140) days, each Party may notify the other Party of the termination of the Contract in accordance with Sub-Clause 19.6 [<i>Optional termination, payment and release</i>]."</p>
Contractor's Claims	20.1	<p><i>Add the following sentence at the end of the 4th paragraph:</i></p> <p>"As long as the event or circumstance giving rise to the claim continues having effect, the Contractor shall use all reasonable endeavours to minimise any incurred delay and/or Cost, including but not limited to those to the Works."</p>
Failure to Comply with Dispute Adjudication Board's Decision	20.7	<p><i>Delete Sub-Clause 20.7 in its entirety and replace it by the following:</i></p> <p>"In the event that a Party fails to comply with any decision of the DAB, whether binding, or final and binding, then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under Sub-Clause 20.6 [<i>Arbitration</i>] for summary or other expedited relief, as may be appropriate.</p> <p>Sub-Clause 20.4 [<i>Obtaining Dispute Adjudication Board's Decision</i>] and Sub-Clause 20.5 [<i>Amicable Settlement</i>] shall not apply to this reference."</p>

Section X – Contract Forms

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Notification of Award

Letter of Acceptance

[Letterhead paper of the Employer]

Date: _____ *[Insert Date]*

To: _____ *[Name and address of the Contractor]*

This is to notify you that your Bid dated _____ *[Insert date]* for execution of the _____ *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount *[amount in numbers and words]* *[name of currency]*, as corrected and modified in accordance with the Instructions to Bidders, is hereby accepted by our institution.

You are requested to furnish the Performance Security within 28 days in accordance with ITB 42, using for that purpose the Performance Security Form included in Section X, Contract Forms, of the Bidding Documents.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of institution: _____

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the _____ day of _____, _____, between _____ of _____ (hereinafter "**the Employer**"), of the one part, and _____ of _____ (hereinafter "**the Contractor**"), of the other part:

WHEREAS the Employer desires that the Works known as _____ should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein, in the sum of *[insert Accepted Contract Amount in words and figures, expressed in the Contract currency(ies)]* (hereafter called the "**Accepted Contract Amount**").

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents. The priority of the documents shall be in accordance with the following documents:
 - a) The Letter of Acceptance;
 - b) The Letter of Bid and Appendix to Bid (including the signed Statement of Integrity);
 - c) The addenda Nos _____ (if any);
 - d) The Particular Conditions;
 - e) The General Conditions;
 - f) The Specifications;
 - g) The Drawings;
 - h) The completed Schedules; and
 - i) The Contractor's Bid and any other documents forming part of the contract.
3. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of _____ on the day, month and year specified above.

Signed by _____ (for the Employer)

Signed by _____ (for the Contractor)

Performance Security

Demand guarantee

Beneficiary: _____

Date: _____

PERFORMANCE GUARANTEE No.: _____

Guarantor: _____

We have been informed that _____ (hereinafter called "**the Bidder**") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "**the Contract**").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Bidder, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ *[insert amount in figures]* (_____) *[insert amount in words]*¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's first demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Bidder is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the _____ day of _____ 2 _____², and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

_____ *[Signature]*

[Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.]

¹ The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

² Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months][one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Advance Payment Security

Demand Guarantee

Beneficiary: _____

Date: _____

ADVANCE PAYMENT GUARANTEE No.: _____

Guarantor: _____

We have been informed that _____ (hereinafter called "**the Bidder**") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "**the Contract**").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ *[amount in numbers and words]* is to be made against an advance payment guarantee.

At the request of the Bidder, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ *[insert amount in figures]* (_____) *[insert amount in words]*¹ upon receipt by us of the Beneficiary's first demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Bidder:

- a) Has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
- b) Has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Bidder has failed to repay.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Bidder on its account number _____ at _____ *[name and address of the bank]*.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Bidder as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less Provisional Sums, has been certified for payment, or on the _____ day of _____, 2____², whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

_____ *[Signature]*

¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.

² Insert the expected expiration date of the Time for Completion. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed *[six months][one year]*, in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Retention Money Security

Demand Guarantee

_____ [Guarantor letterhead or SWIFT identifier code]
Beneficiary: _____ [Insert name and address of Employer]
Date: _____ [Insert date of issue]
RETENTION MONEY GUARANTEE No.: _____ [insert guarantee reference number]
Guarantor: _____ [Insert name and address of place of issue, unless indicated in the letterhead]

We have been informed that _____ [insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture] (hereinafter called "**the Bidder**") has entered into Contract No. _____ [insert reference number of the contract] dated _____ with the Beneficiary, for the execution of _____ [insert name of contract and brief description of Works] (hereinafter called "**the Contract**").

Furthermore, we understand that, according to the Conditions of the Contract, the Beneficiary retains moneys up to the limit set forth in the Contract ("**the Retention Money**"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, payment of the second half of the Retention Money (or, if the amount guaranteed under the Performance Security when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security) is to be made against a Retention Money guarantee.

At the request of the Bidder, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ [insert amount in figures] (_____) [insert amount in words]¹ upon receipt by us of the Beneficiary's first demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Bidder is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as referred to above has been credited to the Bidder on its account number _____ at _____ [insert name and address of Bidder's bank].

This guarantee shall expire, no later than the _____ day of _____ 2 _____², and any demand for payment under it must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

_____ [Signature]

¹ The Guarantor shall insert an amount representing the amount of the second half of the Retention Money or if the amount guaranteed under the Performance Security when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and denominated either in the currency(ies) of the second half of the Retention Money as specified in the Contract, or in a freely convertible currency acceptable to the Beneficiary.

² Insert the same expiry date as set forth in the performance security, representing the date twenty-eight days after the completion date described in GC Clause 11.9. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."