

AFRICAN DEVELOPMENT BANK AFRICAN DEVELOPMENT FUND







PROCUREMENT DOCUMENTS

Volume 1: Bidding Document for Procurement of Works

Procurement of

KENYA TOWNS SUSTAINABLE WATER SUPPLY AND SANITATION PROGRAM

Construction for Kitui Matuu Last Mile Water and Sanitation Project

Issued on: 25th November, 2025

OCBI No: AWWDA/AfDB/KTSWSSP/W/12-A/2025

Athi Water Works Development Agency Kenya

Table of Contents

Part 1: Bidding Procedures	3
Section 1: Instructions to Bidders	4
SECTION II: BID DATA SHEET (BDS)	30
SECTION III - EVALUATION AND QUALIFICATION CRITERIA	37
SECTION IV - BIDDING FORMS	56
TABLE OF FORMS	56
Section V - Eligible Countries	115
SECTION VI - FRAUD AND CORRUPTION	117
Part 2: Works' Requirements	119
SECTION VII - WORKS' REQUIREMENTS	120
Contents	120
Part 3: Conditions of Contract	129
SECTION VIII- PARTICULAR CONDITIONS	130
SECTION IX - GENERAL CONDITIONS OF CONTRACT (GC)	180
SECTION X. GENERAL CONDITIONS (GC)	181



Section 1: Instructions to Bidders

Table of Contents

A. (General	6
1.	Scope of Bid	6
2.	Source of Funds	6
3.	Fraud and Corruption	7
4.	Eligible Bidders	7
5.	Eligible Materials, Equipment, and Services	9
B. C	Contents of Bidding Document	
6.	Sections of Bidding Document	
7.	Clarification of Bidding Document, Site Visit, Pre-Bid Meeting	
8.	Amendment of Bidding Document	.11
C. P	reparation of Bids	
9.	Cost of Bidding	
	Language of Bid	
	Documents Comprising the Bid	
	Letter of Bid and Schedules	
	Alternative Bids	
	Bid Prices and Discounts	
	Currencies of Bid and Payment	
	Documents Comprising the Technical Bid	
	Documents Establishing the Eligibility and Qualifications of the Bidder	
18.	Period of Validity of Bids	.15
	Bid Security	
	Format and Signing of Bid.	
	ubmission and Opening of Bids	
	Sealing and Marking of Bids	
	Deadline for Submission of Bids	
	Late Bids	
	Withdrawal, Substitution, and Modification of Bids	
	Bid Opening	
	valuation and Comparison of Bids	
	Confidentiality	
	Preliminary Examination & Clarification of Bids	
	Deviations, Reservations, and Omissions	
	Determination of Responsiveness	
	Nonmaterial Nonconformities	
	Correction of Arithmetical Errors	
	Conversion to Single Currency	
	Margin of Preference	
	Subcontractors	
	Evaluation of Bids	
	Comparison of Bids	
	Abnormally Low Bids	
38.	Unbalanced or Front Loaded Bids	.25

	39.	Qualifications of the Bidder	26
	40.	Successful Bid or Bids	26
	41.	Employer's Right to Accept Any Bid, and to Reject Any or All Bids	27
	42.	Standstill Period	27
	43.	Notification of Intention to Award	27
F.	. A	ward of Contract	27
	44.	Award Criteria	27
	45.	Notification of Award	27
	46.	Debriefing by the Employer	28
	47.	Signing of Contract	29
	48.	Performance Security	29
		Procurement Related Complaint	

Section I: Instructions to Bidders

A. General

1. Scope of Bid

1.1 In connection with the Specific Procurement Notice – Invitation for Bids (IFB), specified in the Bid Data Sheet (BDS), the Employer, as specified in the BDS, issues this Bidding document for the provision of Works as specified in Section VII, Works' Requirements. The name, identification, and number of "whole of the works", hereafter called 'Works' invited under one or more lots (Contracts) or Packages each lot containing one or more 'Works' or each package containing one or more lots of this IFB are specified in the BDS.

1.2 Throughout this bidding document:

- (a) the term "in writing" means communicated in written form (e.g. by mail, e-mail, fax, including, if specified in the BDS, distributed or received through electronic-procurement system used by the Employer) with proof of receipt;
- (b) if the context so requires, "singular" means "plural' and vice versa;
- (c) "Day" means calendar day, unless otherwise specified as a "Business Day." A Business Day is any day that is a working day of the Borrower. It excludes the Borrower's official public holidays; and
- (d) "ES" means environmental and social (including Sexual Exploitation, and Abuse (SEA) and Sexual Harassment (SH));
- (e) "Sexual Exploitation and Abuse" "(SEA)" means the following:
 - "Sexual Exploitation" is defined as any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another;
 - **"Sexual Abuse"** is defined as the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
- (f) "Sexual Harassment" "(SH)" is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature by the Contractor's Personnel with other Contractor's or Employer's Personnel;
- (g) "Contractor's Personnel" is as defined in Sub- Clause 1.1.17 of the General Conditions of Contract; and
- (h) "Employer's personnel" is as defined in GCC Sub-Clause 1.1.31 of the General Conditions of Contract.
 - A non-exhaustive list of (i) behaviors which constitute SEA and (ii) behaviors which constitute SH is attached to the Code of Conduct form in Section IV.

2. Source of Funds

2.1 The Borrower or Recipient (hereinafter called "Borrower") specified in the BDS has received or has applied for financing (hereinafter called "funds") from the Specific Financing Institution named in the BDS (hereinafter called "the Bank") in an amount specified in the BDS, toward the project named in the BDS. The Borrower intends to

Section	l:	Instructions to	Bidders	Page	6	

- apply a portion of the funds to eligible payments under the contract(s) for which this Bidding document is issued.
- 2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank, and will be subject, in all respects, to the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of goods, equipment, plant, or materials, if such payment or import is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).

3. Fraud and Corruption

- 3.1 The Bank requires compliance with it's Integrity Framework comprising the African Development Bank Group's Sanctions Procedures, the Bank's Whistle-blowing and Complaints Policy, the Bank's Procurement Policy under the Procurement Framework and any other applicable Policies and Procedures including their updates in regard to corrupt and fraudulent practices, as set forth in Section VI.
- 3.2 In further pursuance of this policy, bidders shall permit and shall cause their agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and their personnel, to permit the Bank 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 the Bank.

4. Eligible Bidders

- 4.1 A Bidder may be a firm that is a private entity, a state-owned enterprise or institution subject to ITB 4.6 or any combination of such entities in the form of a joint venture, consortium, or association (JVCA) hereinafter called 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, consortium, or association (JV): a) Unless otherwise specified in the BDS, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms; b) 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; c) The maximum number of members proposed in a JV shall not exceed the number specified in the BDS, or the number derived from the percentage specified under ITB 4.1 (d), whichever is smaller unless both are equal, in which case anyone shall apply; and d) Participation by value of the contract as share of each of the JV partner (member) shall not be less than the percentage specified in the BDS. In case of any inconsistency between ITB 4.1 c) and ITB 4.1 d) such that both cannot be applied simultaneously, the latter shall prevail.
- 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 Bidding process, if the Bidder:

Section I:	Instructions	to	Bidders	Page	۱7

- (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) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the Bid; or
- (f) or any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the Contract implementation; or
- (g) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
- (h) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the Bidding document 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 the Bank throughout the Bidding process and execution of the Contract.
- 4.3 A firm that is a Bidder (either individually or as a JV member) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a subcontractor in other Bids. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member may participate as a subcontractor in more than one Bid.
- 4.4 A Bidder and all parties constituting the Bidder including any subcontractors or suppliers shall have the nationality of an eligible country of the Bank in accordance with the Bank's Procurement Policy for the Bank Group Funded Operations described under the Bank's Procurement Framework, and as listed in Section V, Eligible Countries, subject to the restrictions pursuant to ITB 4.8. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion shall also apply to the determination of the nationality of proposed subcontractors or subconsultants for any part of the Contract including related Services.
- 4.5 A Bidder that has been sanctioned by the Bank, pursuant to the Bank's Integrity Framework, and in accordance with its prevailing sanctions policies and procedures as set forth in the Bank's Integrity Framework, as described in Section VI paragraph 2.2 d. shall be ineligible to be prequalified for, bid for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address specified in the BDS.

ection I: Instructions to Bidders Page 8
--

- 4.6 Bidders that are state-owned enterprises or institutions in the Employer's Country may be eligible to compete and be awarded a Contract(s) only if they can establish, in a manner acceptable to the Bank, that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not under supervision of the Employer.
- 4.7 A Bidder shall not be under suspension from Bidding by the Employer as the result of the operation of a Bid-Securing Declaration.
- 4.8 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country. When the Works are implemented across jurisdictional boundaries (and more than one country is a Borrower, and is involved in the procurement), then exclusion of a firm or individual on the basis of ITB 4.8 (a) above by any country may be applied to that procurement across other countries involved, if the Bank and the Borrowers involved in the procurement agree.
- 4.9 A Bidder shall provide such documentary evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request.
- 4.10 A firm that is under a sanction of debarment by the Borrower from being awarded a contract is eligible to participate in this procurement, unless the Bank, at the Borrower's request, is satisfied that the debarment; (a) relates to fraud or corruption, and (b) followed a judicial or administrative proceeding that afforded the firm adequate due process.

5. Eligible Materials, Equipment, and Services

- 5.1 The materials, equipment and services to be supplied under the Contract and financed by the Bank shall have their origin in an eligible country of the Bank in accordance with the Bank's Procurement Policy for Bank Group Funded Operations described under the Bank's Procurement Framework, and as listed in Section V, Eligible Countries, subject to the restrictions specified therein, Eligible Countries, 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.
- 5.2 The nationality of the firm that produces, assembles, distributes, or sells the materials and equipment shall not determine their origin.

Section I: Instructio	ns to Bidders	Page 9

B. Contents of Bidding Document

6. Sections of Bidding Document

6.1 The Bidding document consists of Parts 1, 2, and 3, which includes 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 Eligible Countries
- Section VI Fraud and Corruption

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 Specific Procurement Notice Invitation for Bids (IFB) issued by the Employer is not part of the Bidding document.
- 6.3 Unless obtained directly from the Employer, the Employer is not responsible for the completeness of the Bidding document, responses to requests for clarification, the minutes of the pre-Bid meeting (if any), or Addenda to the Bidding document 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 document and to furnish with its Bid all information and documentation as is required by the Bidding document.

7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting

7.1 A Bidder requiring any clarification of the Bidding document 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

section i. instructions to bidders rage re	S	ection	ı I:	Instructions	to	Bidders	<u> </u>	Page	1(J
--	---	--------	------	--------------	----	---------	----------	------	----	---

Bidding document 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 document, the Employer shall amend the Bidding document 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 and/or a Site of Works visit. 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 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 document in accordance with ITB 6.3. If so specified in the BDS, the Employer shall also promptly publish the Minutes of the pre-Bid meeting at the web page identified in the BDS. Any modification to the Bidding document 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 Document

- 8.1 At any time prior to the deadline for submission of Bids, the Employer may amend the Bidding document by issuing addenda.
- 8.2 Any addendum issued shall be part of the Bidding document and shall be communicated in writing to all who have obtained the Bidding document from the Employer in accordance with ITB 6.3. The Employer shall also promptly publish the addendum on the Employer's web page in accordance with ITB 7.1.

8.3 To give Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer should 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:
 - (a) Letter of Bid prepared in accordance with ITB 12;
 - (b) Schedules including priced Bill of Quantities, completed in accordance with ITB 12 and ITB 14;
 - (c) Bid Security or Bid-Securing Declaration, in accordance with ITB 19.1;
 - (d) Technical Bid of Base Bid;
 - (e) Commercial Terms and Conditions;
 - (f) Alternative Technical Bid, if permissible, in accordance with ITB 13;
 - (g) Authorization: written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.3;
 - (h) Eligibility and Qualifications: documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility and qualifications to perform the Contract if its Bid is accepted;
 - (i) Conformity: documentary evidence in accordance with ITB 16 and ITB 30, and in support of above sub-paragraphs (d) and (e) of ITB 11.1, as necessary, to establish that the offered Works and Services, and Terms and Conditions of the Bid conform to the requirements and provisions of the bidding document; and
 - (j) 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

S	Section	l:	Instruct	ions to	o E	Bidders	Page	1	2

- 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 in the Letter of Bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.
- 11.4 The Bidder shall furnish in the Letter of Bid the names of three potential Dispute Avoidance/Adjudication Board (DAAB) members and attach their curriculum vitae. The list of potential DAAB members proposed by the Employer (Contract Data 21.1) and by the Bidder (Letter of Bid) shall be subject to the Bank's No-objection.

12. Letter of Bid and Schedules

12.1 The Letter of Bid and Schedules, including the Bill of Quantities, shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.3. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

- 13.1 Unless otherwise specified in the BDS, alternative Bids shall not be considered. If Alternative Bids are permitted, the BDS shall specify which of the following ITB (s) namely, ITB 13.2, ITB 13.3 and ITB 13.4 shall be considered.
- 13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the BDS, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.
- 13.3 Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the Bidding document must first price the Employer's design as described in the Bidding document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Bidder with the Lowest Evaluated Bid conforming to the basic technical requirements shall be considered by the Employer.
- 13.4 When specified in the BDS, Bidders are permitted to submit alternative technical solutions for specified parts of the Works. Such parts will be identified in the BDS and described in Section VII, Works' Requirements. The method for their evaluation will be stipulated in Section III, Evaluation and Qualification Criteria.

14. Bid Prices and Discounts

14.1 The prices and discounts (including any price reduction) quoted by the Bidder in the Letter of Bid and in the Bill of Quantities shall conform to the requirements specified below.

- 14.2 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 average or the highest price of the item as specified in the BDS 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, in accordance with ITB 12.1, 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, in accordance with ITB 12.1, ITB 14.6 and ITB 14.7.
- 14.5 Unless otherwise specified in the BDS and the Conditions of Contract, the rates and prices 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. A Bid submitted with a fixed price basis shall not be rejected unless otherwise specified in the BDS and in the latter case, a Bid submitted with fixed price shall be rejected.
- 14.6 **As specified in the BDS**, bids are being invited for "Works" as a single contract (or as one lot); or for individual lots (contracts) each lot containing one or more 'Works'; or for any combination of lots (packages). Bidders wishing to offer discounts for the award of more than one Contract (lot) shall specify in their Bid the price reductions applicable to each contract (lot) and package as the case may be. Bidders shall fully explain the methodology and calculations for applying such discounts, showing how the reductions are derived and the net amounts of each contract after the application of the offered discounts to individual items. Discounts can be offered only for those items for which the Bidder is required to bid and not for any item where the Employer has included its estimated cost as a fixed sum or a percentage in the Bill of Quantities. Discounts shall be submitted in accordance with ITB 14.4, and ITB 14.6 provided that the Bids for all lots (contracts) are opened at the same time.
- 14.7 Discounts offered shall be clear and without any vagueness or ambiguity to avoid rejection of the bid as no clarification shall be requested or permitted on this account after bid submission. The Employer's decision on a bid's discount will be based on the contents of the bid itself, without recourse to any extrinsic evidence. If in the Employer's opinion, which will be final, a discount offered in the bid: I) is unclear, ambiguous or vaguely presented to the extent that it cannot be either interpreted or applied with reasonable accuracy, the Bid shall be rejected; II) relates to any item of cost for which the Bidder is not required to submit a bid price or the Employer may have indicated the estimated cost e.g. for a provisional sum or contingencies as per the bidding document, then the bid will be evaluated without the application of the discount offered for such item of cost; and III) has minor discrepancy or unclarity which could be interpreted reasonably, the Employer in this case may decide not to reject the bid and apply the

- discount as it deems reasonable and appropriate resulting in the lowest evaluated cost to the Employer. If the Bidder does not accept the Employer's decision based on any of the above, the bid shall be rejected.
- 14.8 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 unit rates and prices and 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 Bid

16.1 The Bidder shall furnish details of technical specifications proposed in the Technical Bid including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Bidding Forms, or elsewhere in the bidding document, and if applicable, a statement of deviations and exceptions to any of the provisions of the bidding document, in sufficient detail to demonstrate the adequacy of the Bidder's proposal to meet the Employer's work's requirements and the completion time, and to demonstrate substantial responsiveness to the technical specifications required as per the provisions of the Section VII, Work's Requirements.

17. Documents Establishing the Eligibility and Qualifications of the Bidder

- 17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid, included in Section IV, Bidding Forms.
- 17.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract the Bidder shall provide the information requested in the corresponding forms included in Section IV, Bidding Forms.
- 17.3 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 or regional preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITB 33.1.

18. Period of Validity of Bids

18.1. Bids shall remain valid for the Bid Validity period specified in the BDS or any extended period if amended by the Employer in accordance with ITB 8. The Bid Validity period starts from the date fixed for the Bid submission deadline (as prescribed by the Employer in accordance with ITB 22). A Bid valid for a shorter period shall be rejected by the Employer as nonresponsive.

ς	Section	1:	Instructions	to	Bid	ders	Pa	ge	1	5)

- 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 period, 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 to reflect any increase in the cost of inputs over the period of extension, which for the purpose of this adjustment, shall be the period elapsed between the date arrived immediately after expiry of the fifty-six (56) days beyond the initial Bid validity period and the date of notification of award;
 - (b) in the case of adjustable price contracts, no adjustment shall be made; and
 - (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 amount as specified in the BDS, in original form and, in the case of a Bid Security amount, 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 amount 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 non-bank 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,

The Bidders shall obtain the Bid Security from a reputable source from an eligible country. If an unconditional guarantee is issued by a non-bank financial institution located outside the Employer's Country, the issuing non-bank financial institution shall have a correspondent financial institution located in the Employer's Country to make it enforceable unless the Employer has agreed in writing, prior to Bid submission, that a correspondent financial institution is not required. In the case of a bank guarantee, the Bid Security shall be submitted either using the Bid Security Form included in Section

Section I	l:	Instructions	to	Bio	dders	Page	1	(5

- 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 If a Bid Security in amount or Bid-Securing Declaration is specified pursuant to ITB 19.1, any Bid not accompanied by a substantially responsive Bid Security in amount or Bid-Securing Declaration whichever is required, shall be rejected by the Employer as non-responsive.
- 19.5 If a Bid Security is specified pursuant to ITB 19.1, 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 and if required in the BDS, the Environmental and Social (ES) Performance Security pursuant to ITB 48.
- 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, and if required in the BDS, the Environmental and Social (ES) Performance Security.
- 19.7 The Bid Security amount may be forfeited:
 - (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 47; or
 - (ii) furnish a Performance Security and if required in the BDS, the Environmental and Social (ES) Performance Security in accordance with ITB 48.
- 19.8 The Bid Security amount 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 amount 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 Securing Declaration is required in the BDS, pursuant to ITB 19.1, and:
 - 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 47; or

(ii) furnish a Performance Security and, if required in the BDS, the Environmental and Social (ES) Performance Security in accordance with ITB 48,

the Borrower may execute the Bid Securing Declaration, as provided for in the BDS, declare the Bidder ineligible to be awarded a contract by the Employer for a period of time 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 Bidders shall mark as "CONFIDENTIAL" all information in their Bids which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.
- 20.3 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.
- 20.4 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.
- 20.5 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 deliver the Bid in a single, sealed envelope (one-envelope Bidding process). Within the single envelope the Bidder shall place the following separate, sealed envelopes:
 - (a) in an envelope marked "ORIGINAL", all documents comprising the Bid, as described in ITB 11; and
 - (b) in an envelope marked "COPIES", all required copies of the Bid; and
 - (c) if alternative Bids are permitted in accordance with ITB 13, and if relevant:

- (i) in an envelope marked "ORIGINAL ALTERNATIVE BID", the alternative Bid; and
- (ii) in the envelope marked "COPIES ALTERNATIVE BID", all required copies of the alternative Bid.
- 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 specified in accordance with BDS 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 document 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 20.3, (except that withdrawal notices do not require copies). 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

S	Section	l:	Instructions	to	Bidde	ers	_ Page	1	1	9	

- (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 ITB 24.2, the Employer shall publicly open and read out in accordance with this ITB all Bids received by the deadline, at the date, time and place specified in the BDS, in the presence of Bidders' designated representatives and anyone who chooses 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.
- 25.3 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.
- 25.4 Next, 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.
- 25.5 Next, all remaining 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.
- 25.6 Only Bids, alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation. The Letter of Bid and the Bill of Quantities are to be initialed by representatives of the Employer attending Bid opening in the manner specified in the BDS.
- 25.7 The Employer shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with ITB 23.1).
- 25.8 The Employer shall prepare a record of the Bid opening that shall include, as a minimum:

S	Sectio	on I:	: Ir	nstructi	ons	to	Bio	ders	Ρ	age	2	C	J

- (a) the name of the Bidder and whether there is a withdrawal, substitution, or modification;
- (b) the Bid Price, per lot (contract) if applicable, including any discounts;
- (c) any alternative Bids;
- (d) the presence or absence of a Bid Security, if one was required.
- 25.9 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 evaluation of Bids 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 Intention to Award the Contract is transmitted to all Bidders in accordance with ITB 43.
- 26.2 Any effort by a Bidder to influence the Employer in the evaluation of the Bids 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. Preliminary Examination & Clarification of Bids

- 27.1 Prior to the detailed evaluation, pursuant to ITB 35, the Employer will conduct preliminary examination of all bids that have been received by the deadline for bid submission and opened at the public bid opening as the first step towards determination of their substantial responsiveness to the bidding document. 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 without recourse to extrinsic evidence. The Employer will verify and examine bids to determine whether they are complete, properly signed to bind the bidder, meet eligibility requirements of bidders, materials, equipment, and services, bidders have no conflict of interest and have provided required Bid validity, Bid Security or Bid Securing Declaration, as required and other essential documents to complete the evaluation, and whether the bids are generally in order. Subject to ITB 27.2 and 27.3, Bids failing to meet the above requirements shall be rejected and not retained for further review.
- 27.2 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

Section	l:	Instructions	to	Bidders	Page l	2	.1	l

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

29. Determination of Responsiveness

- 29.1 Following the rejection of Bids if any, pursuant to ITB 27, as the next step, the remaining Bids will be further reviewed to determine their substantial responsiveness. 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 document 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 document, 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 Bids.
- 29.3 The Employer shall examine the technical aspects of the Bid in accordance with ITB 16, ITB 17, ITB 29, ITB 30, BDS if applicable, and Section III Evaluation and Qualification Criteria in particular, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission. To this end, in consideration of the materiality of any deviations, reservations or omissions, Bids failing to meet the mandatory technical requirements or minimum passfail technical criteria or failing to substantially meet any other technical requirements of the biding document will risk their rejection.
- 29.4 The Employer shall similarly examine the commercial aspects of the bids including any deviations, other than technical specifications, submitted in response to the provisions of the bidding document, to determine if they conform to the terms and conditions of the

Section I	•	Instructions	tο	Ric	dders	Page l	- 2	2)
		ilisti actions	w	חוכ	aucis	 i ugc j		-	•

- draft contract and other documents included in the bidding document without any material deviation, reservation or omission, and establishment of materiality in such aspects will similarly risk rejection of the Bids.
- 29.5 If a Bid is not substantially responsive to the requirements of the Bidding document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission. All other bids determined substantially responsive will be retained for further evaluation.

30. Nonmaterial Nonconformities

- 30.1 Provided that a Bid is substantially responsive, the Employer may waive any nonconformities 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 nonmaterial nonconformities in the Bid related to documentation requirements. Requesting information or documentation on such nonconformities 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 Provided that a Bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities 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 nonconforming item or component and costs associated, if any, with non-material deviations, reservations and omissions to the requirements of the bidding documents in the manner specified in the BDS.

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) 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) 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 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.

Section	l:	Instructions	to	Bio	dders	Page	2	3	Š

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 no margin of domestic or regional preference shall apply. If a margin of preference is applicable, the application methodology shall be as specified in Section III, Evaluation and Qualification Criteria, and in accordance with the provisions stipulated in the Bank's Procurement Framework.

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.
- 34.2 Bidders may propose subcontracting up to the percentage of total value of contracts or the volume of works as specified in the BDS. Subcontractors proposed by the Bidder shall be fully qualified for their parts of the Works.
- 34.3 The subcontractor's qualifications shall not be used by the Bidder to qualify for the Works unless their specialized parts of the Works were previously designated by the Employer in the BDS as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications with respect to only the specific work experience of the Specialized Subcontractors proposed by the Bidder may be added to the qualifications of the Bidder.

35. Evaluation of Bids

- 35.1 The Employer shall use the criteria and methodologies listed in this ITB and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies the Employer shall determine the successful Bid or Bids in accordance with ITB 40.
- 35.2 To evaluate Bids, the Employer shall consider the following factors, in accordance with the evaluation and award criteria as applicable for single contract (one lot), lots (contracts) or packages (combination of lots) and as specified under Section III-Evaluation and Qualification Criteria:
 - a) the Bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, 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 discounts offered in accordance with ITB 12.1, ITB 14.4, ITB 14.6 and ITB 14.7;
 - d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 32;

Sectio	on I:	: Insti	ructio	ons	to	Bic	lders	i	Page	24	4

- e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 30.3;
- f) the additional evaluation factors specified in the BDS and Section III, Evaluation and Qualification Criteria; and
- g) price adjustment due to application of Margin of Preference, if applicable, as per BDS of ITB 33.1, and 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 this Bidding document allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the Letter of Bid, is specified in Section III, Evaluation and Qualification Criteria.

36. Comparison of Bids

36.1 The Employer shall compare the evaluated costs of all substantially responsive Bids established in accordance with ITB 35.2 to determine the Bid that has the lowest evaluated cost.

37. Abnormally Low Bids

- 37.1 An Abnormally Low Bid is one where the Bid price, in combination with other elements of the Bid, appears so low that it raises material concerns as to the capability of the Bidder in regards to the Bidder's ability to perform the Contract for the offered Bid Price.
- 37.2 In the event of identification of a potentially Abnormally Low Bid, the Employer shall seek written clarifications from the Bidder, including detailed price analyses of its Bid price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Bidding document.
- 37.3 After evaluation of the price analyses, in the event that the Employer determines that the Bidder has failed to demonstrate its capability to perform the Contract for the offered Bid Price, the Employer may reject the Bid.

38. Unbalanced or Front-Loaded Bids

- 38.1 If the Bid that is evaluated as the lowest evaluated cost is, in the Employer's opinion, seriously unbalanced or front loaded, the Employer may require the Bidder to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the Bid prices with the scope of works, proposed methodology, schedule and any other requirements of the Bidding document.
- 38.2 After the evaluation of the information and detailed price analysis presented by the Bidder, the Employer may as appropriate:

	S	Secti	on	l:	Instructi	ions t	to	Bid	ders		Page	2	5
--	---	-------	----	----	-----------	--------	----	-----	------	--	------	---	---

- (a) accept the Bid; or
- (b) require that the total amount of the Performance Security be increased at the expense of the Bidder to a level not exceeding 20% of the Contract Price; or
- (c) reject the Bid.

39. Qualifications of the Bidder

- 39.1 The Employer shall determine to its satisfaction whether the eligible Bidder or Bidders that is/are selected as having submitted the lowest evaluated cost and substantially responsive Bid(s), substantially meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria. To this end, the Employer will determine for which Lots and Packages, and/or their combinations, as the case may be, for which Bidder submitted bid, it substantially meets the respective minimum qualification criteria.
- 39.2 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. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the Bidding document), or any other firm(s) different from the Bidder.
- 39.3 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 Bidder or Bidders who offered substantially responsive Bid or Bids with the next lowest evaluated cost to make a similar determination of such Bidders' qualifications to perform satisfactorily.
- 39.4 The Employer reserves the right to waive minor deviations from the qualification criteria if they do not materially affect the technical capability and financial resources of the Bidder to perform the Contract or combination of Contracts.

40. Successful Bid or Bids

- 40.1 Having compared the evaluated costs of Bids, the Employer shall determine the successful Bid or combination of Bids as the case may be, in accordance with the additional Bid Evaluation Criteria as further described in Section III. Such Bid or Bids would be those which has/have been determined to:
 - (a) be substantially responsive to the Bidding document;
 - (b) offer the lowest evaluated cost to the Employer for all works to be procured based on either a single Contract or all multiple Contracts combined, as the case may be, in accordance with the ITB 14.6 inviting bid prices and discounts, and provisions made in the Bidding Document for evaluation of bids and award of contract (s); and
 - (c) be offered by Bidder or Bidders that substantially meet the qualification criteria applicable for Contract or combination of Contracts for which they are selected.

Section I:	Instructions	to Bidders	F	Page	2	6
	II IS CI G C CI O I IS	, to Bladels		490	_	•

41. Employer's Right to Accept Any Bid, and to Reject Any or All Bids

41.1 The Employer reserves the right to accept or reject any Bid and 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.

42. Standstill Period

42.1 The Contract shall not be awarded earlier than the expiry of the Standstill Period. The Standstill Period shall be ten (10) Business Days unless extended in accordance with ITB 46. The Standstill Period commences the day after the date the Employer has transmitted to each Bidder the Notification of Intention to Award the Contract. Where only one Bid is submitted, or if this contract is in response to an emergency situation recognized by the Bank, the Standstill Period shall not apply.

43. Notification of Intention to Award

- 43.1 The Employer shall send to each Bidder the Notification of Intention to Award the Contract to the successful Bidder. The Notification of Intention to Award shall contain, at a minimum, the following information:
 - (a) the name and address of the Bidder submitting the successful Bid;
 - (b) the Contract price of the successful Bid;
 - (c) the names of all Bidders who submitted Bids, and their Bid prices as readout, and as evaluated:
 - (d) a statement of the reason(s) the Bid (of the unsuccessful Bidder to whom the notification is addressed) was unsuccessful, unless the price information in c) above already reveals the reason;
 - (e) the expiry date of the Standstill Period; and
 - (f) instructions on how to request a debriefing and/or submit a complaint during the standstill period;

F. Award of Contract

44. Award Criteria

44.1 Subject to ITB 41, and unless otherwise specified in the BDS, the Employer shall award the Contract or Contracts to the Bidder or Bidders whose Bid or Bids has/have been determined successful in accordance with ITB 40.

45. Notification of Award

45.1 Prior to the expiry of the Bid Validity Period and upon expiry of the Standstill Period specified in ITB 42.1 or any extension thereof, and, upon satisfactorily addressing any complaint that has been filed within the Standstill Period, the Employer shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification of award

ς	action	ŀ	Instructions	to	Ric	darc	Page	l 2	7	7
_	CCLIOII	٠.	111311 4 C 11 O 113	w	חום	auci 3	 ı ağc	ı -	- 1	

(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 of the Contract (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price").

- 45.2 Within ten (10) Business Days after the date of transmission of the Letter of Acceptance, the Employer shall publish the Contract Award Notice which shall contain, at a minimum, the following information:
 - (a) name and address of the Employer;
 - (b) name and reference number of the contract being awarded, and the selection method used;
 - (c) names of all Bidders that submitted Bids, and their Bid prices as read out at Bid opening, and as evaluated;
 - (d) names of all Bidders whose Bids were rejected either as nonresponsive or as not meeting qualification criteria, or were not evaluated, with the reasons therefor;
 - (e) the name of the successful Bidder, the final total contract price, the contract duration and a summary of its scope; and
 - (f) successful Bidder's Beneficial Ownership Disclosure Form, if specified in BDS ITB 47.1
- 45.3 The Contract Award Notice shall be published on the Employer's website with free access if available, or in at least one newspaper of national circulation in the Employer's Country, or in the official gazette. The Employer shall also publish the contract award notice in UNDB online.
- 45.4 Until a formal Contract is prepared and executed, the Letter of Acceptance shall constitute a binding Contract.

46. Debriefing by the Employer

- 46.1 On receipt of the Employer's Notification of Intention to Award referred to in ITB 43.1, an unsuccessful Bidder has three (3) Business Days to make a written request to the Employer for a debriefing. The Employer shall provide a debriefing to all unsuccessful Bidders whose request is received within this deadline.
- Where a request for debriefing is received within the deadline, the Employer shall provide a debriefing within five (5) Business Days, unless the Employer decides, for justifiable reasons, to provide the debriefing outside this timeframe. In that case, the standstill period shall automatically be extended until five (5) Business Days after such debriefing is provided. If more than one debriefing is so delayed, the standstill period shall not end earlier than five (5) Business Days after the last debriefing takes place. The Employer shall promptly inform, by the quickest means available, all Bidders of the extended standstill period.
- Where a request for debriefing is received by the Employer later than the three (3) Business Days deadline, the Employer should provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of

Sectio	on I:	: Instruct	ions to	Bidders	 Page	28	8

- publication of Public Notice of Award of contract. Requests for debriefing received outside the three (3) days deadline shall not lead to extension of the standstill period.
- 46.4 Debriefings of unsuccessful Bidders may be done in writing or verbally. The Bidder shall bear its own costs of attending such a debriefing meeting.

47. Signing of Contract

- 47.1 The Employer shall send to the successful Bidder the Letter of Acceptance including the Contract Agreement, and, if specified in the BDS, a request to submit the Beneficial Ownership Disclosure Form providing additional information on its beneficial ownership. The Beneficial Ownership Disclosure Form, if so requested, shall be submitted within eight (8) Business Days of receiving this request.
- 47.2 The successful Bidder shall sign, date and return to the Employer, the Contract Agreement within twenty-eight (28) days of its receipt.

48. Performance Security

- Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the Employer, the successful Bidder shall furnish the Performance Security and, if required in the BDS, the Environmental and Social (ES) Performance Security in accordance with the General Conditions of Contract, subject to ITB 38.2 (b), using for that purpose the Performance Security and ES Performance Security Forms 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, unless the Employer has agreed in writing that a correspondent financial institution is not required.
- 48.2 Failure of the successful Bidder to submit the above-mentioned Performance Security and, if required in the BDS, the Environmental and Social (ES) Performance Security, or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Employer may award the Contract to the Bidder or Bidders offering the next Lowest Evaluated Cost to the Employer as per the bid evaluation and award criteria.

49. Procurement Related Complaint

49.1 The procedures for making a Procurement-related Complaint are as specified in the BDS.

Section II: Bid Data Sheet (BDS)

The following specific data for the Works to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in the ITB.

	A. General
ITB 1.1	The reference number of the Invitation for Bids (IFB) is: AWWDA/AfDB/KTSWSSP/W/12-A/2025 The Employer is: Athi Water Works Development Agency
	Name of Works: Construction of Kitui Matuu Last Mile Water and Sanitation Project
	The name of the IFB is: Open Competitive Bidding Number (International) (OCBI)]
	The number and identification of works under single or multiple lots (contracts) comprising this IFB is: AWWDA/AfDB/KTSWSSP/W/12-A/2025
ITB 1.2(a)	N/A
ITB 2.1	The Borrower is: Government of Kenya The Specific Bank financing institution is: African Development Bank (AfDB) The name of the Project is: Construction of Kitui - Matuu Last Mile Water
	and Sanitation Project
ITB 4.1 (a)	The firms in a Joint Venture, Consortium or Association (JV) shall be jointly and severally liable.
ITB 4.1 (c)	Maximum number of members in the Joint Venture, Consortium or Association (JV) shall be: 3 (Three)
ITB 4.1 (d)	Minimum share of a member of Joint Venture, Consortium or Association (JV) in the contract shall not be less than 33.3% percent of the total value of the contract
ITB 4.5	A list of debarred firms and individuals is available on the Bank's external website: https://www.afdb.org/en/projects-operations/ debarment-and-sanctions-procedures
	B. Contents of Bidding Document
ITB 7.1	For <u>Clarification of Bid purposes</u> only, the Employer's address is: Attention: The Chief Executive Officer Address:

Athi Water Works Development Agency. Athi Water Plaza, Muthaiga North Road, P.O Box 45283 - 00100 City: Nairobi Country: Kenya Telephone: +254-20-2724292/3, 2711342 Facsimile number: +254-20-2724295 Electronic mail address: info@awwda.go.ke Web page: www.awwda.go.ke **ITB 7.4** A Pre-Bid meeting *shall* take place at the following date, time and place: Date: 17th December, 2025 Time: 10:00 am Place: The venue for the Pre-bid meeting will be at the Tanathi Water Works Development Agency Offices, KIDP Building, Kitui Town. A site visit conducted by the Employer shall be organized Date: 17th December, 2025 Time: 10:30am Place: The venue for the Pre-bid site visit will be starting at the Tanathi Water Works Development Agency Offices, KIDP Building, Kitui Town to visit Kitui, Matuu, Wote and Gatuanyaga project sites. **ITB 7.6** Web page: www.awwda.go.ke C. Preparation of Bids **ITB 10.1** The language of the Bid is: **English**. All correspondence exchange shall be **English** language. Language for translation of supporting documents and printed literature is N/A. ITB 11.1 (j) The Bidder shall submit the following additional documents in its Bid: As per Section IV, and: **Code of Conduct for Contractor's Personnel (ES)** The Bidder shall submit its Code of Conduct that will apply to Contractor's Personnel (as defined in Sub- Clause 1.1.17 of the General Conditions of Contract), to ensure compliance with the Contractor's Environmental and Social (ES) obligations under the Contract. The Bidder shall use for this purpose the Code of Conduct form provided in Section IV. No substantial modifications shall be made to this form, except that the Bidder may introduce additional requirements, including as necessary to take into account specific Contract issues/ risks.

	Management Strategies and Implementation Plans (MSIP) to manage the (ES) risks
	The Bidder shall submit Management Strategies and Implementation Plans (MSIPs) to manage the following key Environmental and Social (ES) risks:
ITB 13.1	Alternative Bids shall not be considered.
ITB 13.2	Alternative times for completion <i>shall not be</i> permitted.
ITB 13.3	Technical Alternative as per ITB 13.3 <i>shall not be</i> permitted.
ITB 13.4	Alternative technical solutions <i>shall not be</i> permitted.
ITB 14.5	The prices quoted by the Bidder shall be: fixed : "A bid submitted with price subject to adjustment shall be rejected".
ITB 14.6	Option 1: Bids are invited, and Bidders shall bid for 'Works'.
ITB 15.1	The currency(ies) of the Bid and the payment currency(ies) shall be in accordance with Alternative A as described below:
	Alternative A (Bidders to quote entirely in local currency):
	(a) The unit rates and the prices shall be quoted by the Bidder in the Bill of Quantities, entirely in Kenya Shillings (KES) and further referred to as "the local currency". A Bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's Country (referred to as "the foreign currency requirements") shall indicate in the Appendix to Bid - Table C, the percentage(s) of the Bid Price (excluding Provisional Sums), needed by the Bidder for the payment of such foreign currency requirements, limited to no more than three foreign currencies.
	(b) The rates of exchange to be used by the Bidder in arriving at the local currency equivalent and the percentage(s) mentioned in (a) above shall be specified by the Bidder in the Appendix to Bid - Table C, and shall apply for all payments under the Contract so that no exchange risk will be borne by the successful Bidder.
	Alternative B (Bidders allowed to quote in local and foreign currencies):
	(a) The unit rates and prices shall be quoted by the Bidder in the Bill of Quantities separately in the following currencies:
	(i) for those inputs to the Works that the Bidder expects to supply from within the Employer's Country, in Kenya Shillings (KES) and further referred to as "the local currency"; and
	(ii) for those inputs to the Works that the Bidder expects to supply from outside the Employer's Country (referred to as "the foreign currency requirements"), in up to any three foreign currencies.
ITB 18.1	The Bid validity period shall be 120 days.

ITB 18.3 (a)	The Bid price shall be adjusted by the following factor(s): N/A
ITB 19.1	A Bid Security amount shall be required.
	A Bid-Securing Declaration shall not be required.
	If a Bid Security amount shall be required, the amount and currency of the Bid Security shall be KES 1,500,000.00 (Kenya Shillings One Million, Five Hundred Thousand Only)
ITB 19.3 (d)	Other types of acceptable securities: None
ITB 19.9	If the Bidder performs any of the actions prescribed in ITB 19.9 (a) or (b), the Borrower will declare the Bidder ineligible to be awarded contracts by the Employer for a period of 4 (Four) years.
ITB 20.1	In addition to the original of the Bid, the number of copies is: 3 (Three).
ITB 20.3	The written confirmation of authorization to sign on behalf of the Bidder shall consist of: Power of Attorney
	D. Submission and Opening of Bids
ITB 22.1	For <u>Bid submission purposes</u> only, the Employer's address is:
	Attention: The Chief Executive Officer
	Address: Athi Water Works Development Agency
	Athi Water Plaza, Muthaiga North Road,
	P.O Box 45283 - 00100
	City: Nairobi
	Country: Kenya
	Telephone: +254-20-2724292/3, 2711342
	Facsimile number: +254-20-2724295
	Electronic mail address: <u>info@awwda.go.ke</u>
	The deadline for Bid submission is:
	Date: 21st February, 2026.
	Time: 12:00 pm East African Time
	Diddors shall not have the entire of submitting their Dide electronic aller
	Bidders shall not have the option of submitting their Bids electronically. The electronic Bidding submission procedures shall be: N/A
ITD 25 1	-
ITB 25.1	The Bid opening shall take place at: Address:

	Athi Water Works Development Agency.
	Athi Water Plaza, Muthaiga North Road,
	P.O Box 45283 - 00100
	City: Nairobi
	Country: Kenya
	Telephone: +254-20-2724292/3, 2711342
	Facsimile number: +254-20-2724295
	Electronic mail address: info@awwda.go.ke
	Date: 21st February, 2026.
	Time: 12:05 pm EAT
ITB 25.1	The electronic Bid opening procedures shall be: N/A
ITB 25.6	The Letter of Bid and Schedules shall be initialized by representatives of the Employer conducting Bid opening.
E. Evaluation, and Comparison of Bids	
ITB 30.3	The adjustment with respect to a missing or non-conforming item or component, and costs associated, if any, with non-material deviations, reservations or omissions to the requirements of the bidding document shall be based on the highest price of the item or component and cost, if any, of non-material deviations, reservations or omissions as quoted in or derived from other substantially responsive Bids unless any other specific evaluation criteria has been provided elsewhere in the bidding document for such adjustments in which case the latter shall be applied. If the price or cost of any of the above cannot be derived from the price of other substantially responsive Bids, the Employer shall use its best estimate based on its own judgment, past experience or market search, as considered appropriate.
ITB 32.1	The currency that shall be used for Bid evaluation and comparison purposes to convert at the selling exchange rate all Bid prices expressed in various currencies into a single currency is: Kenya Shillings (KES) The source of exchange rate shall be: The Central Bank of Kenya-Selling rate. The date for the exchange rate shall be: Bid submission deadline The currency(ies) of the Bid shall be converted into a single currency in accordance with the procedure under Alternative A that follows: Alternative A: Bidders quote entirely in local currency For comparison of Bids, the Bid Price, corrected pursuant to ITB 31, shall first be broken down into the respective amounts payable in various
	currencies by using the selling exchange rates specified by the Bidder in accordance with ITB 15.1.

	In the second step, the Employer will convert the amounts in various currencies in which the Bid Price is payable (excluding Provisional Sums but including Daywork where priced competitively) to the single currency identified above at the selling rates established for similar transactions by the authority specified and, on the date, stipulated above.
ITB 33.1	A margin of domestic preference shall not apply. A margin of regional preference shall not apply
ITB 34.1	At this time the Employer does not intend to execute certain specific parts of the Works by subcontractors selected in advance.
ITB 34.2	Contractor's proposed subcontracting: Maximum percentage of subcontracting permitted is:30_% of the total contract amount or _30_% of the volume of work Bidders planning to subcontract more than 10% of total volume of work shall specify, in the Letter of Bid, the activity (ies) or parts of the Works to be subcontracted along with complete details of the subcontractors and their qualification and experience.
ITB 34.3	N/A
ITB 35.2 (f)	N/A
F. Award of Contract	
ITB 47.1	The successful Bidder shall submit the Beneficial Ownership Disclosure
	Form.
ITB 48.1 and 48.2	Form. N/A

- 1. the terms of the Bidding Documents;
- 2. the purchaser's decision to exclude a bidder from the procurement process prior to the award of contract; and
- **3.** the Employer's decision to award the contract.

The Bank's Procurement Framework stipulates that bidders may send copies of their communications with the Borrowers to the Bank or write to the Bank directly when, Borrowers do not respond promptly, any questions on any issues regarding the implementation of Bank funded projects, or when the communication is a complaint against the Borrower. In this regard, if a bidder wishes to protest against a decision made by a Borrower or the Bank with regards to the procurement process or wishes to inform the Bank that the Bank's procurement rules and/or provisions of the bidding documents have not been complied with, an email can be sent to the following address:

Email: procurementcomplaints@afdb.org

Section III - Evaluation and Qualification Criteria

This section contains all the criteria that the Employer shall use to evaluate Bids and qualify Bidders. No other factors, methods or criteria shall be used other than specified in this Bidding document. The Bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms. Wherever a Bidder is required to state a monetary amount, Bidders should indicate the USD equivalent using the rate of exchange determined as follows:

- For construction turnover or financial data required for each year Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.
- Value of single contract Exchange rate prevailing on the date of the contract.

Exchange rates shall be taken from the publicly available source identified in the ITB 32.1. Any error in determining the exchange rates in the Bid may be corrected by the Employer.

Table of Criteria

1.	Margin of Preference	38
2.	Successful Bid or Bids & Evaluation	39
3.	Qualification	41
4.	Contractor's Representative and Key Personnel	53
5.	Equipment	54

1. Margin of Preference

1.1 Preference for Domestic Contractors

If the BDS so specifies, the Employer will grant a margin of preference of 10% (ten percent) to domestic contractors, in accordance with, and subject to, the following provisions:

- (a) Contractors applying for such preference shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Borrower and accepted by the Bank, a particular contractor or group of contractors qualifies for a domestic preference. The Bidding document shall clearly indicate the preference and the method that will be followed in the evaluation and comparison of Bids to give effect to such preference.
- (b) After Bids have been received and reviewed by the Employer, responsive Bids shall be classified into the following groups:
 - (i) Group A: Bids offered by domestic contractors eligible for the preference.
 - (ii) Group B: Bids offered by other contractors.

All evaluated Bids in each group shall, as a first evaluation step, be compared to determine the Bid with lowest evaluated cost, and the Bid with the lowest evaluated cost in each group shall be further compared with each other. If as a result of this comparison, a Bid from Group A is the lowest, it shall be selected for the award, if the Bidder is determined substantially qualified. If a Bid from Group B is the lowest, as a second evaluation step, all Bids from Group B shall then be further compared with the lowest evaluated cost from Group A. For the purpose of this further comparison only, an amount equal to 10% (ten percent) of the respective Bid price of Group B corrected for arithmetical errors, including unconditional discounts but excluding provisional sums and the cost of day works, if any, shall be added to the evaluated cost offered in each Bid from Group B. If the Bid from Group A is the lowest, it shall be selected for award. If not, the Bid offering the lowest evaluated cost from Group B based on the first evaluation step shall be selected, if the Bidder is determined substantially qualified.

1.2 Preference for Regional Contractors

If the BDS so specifies, the Employer will grant a regional preference to contractors in RMCs that have joined the Borrower's country in a regional cooperation agreement designed to foster economic integration, by a customs union, or a free trade area.in accordance with the following procedure. All responsive bids will be classified in one of the following two groups:

Group A: Bids offered by contractors, which have established, to the satisfaction of the Borrower and the Bank, to be eligible for regional preference; and

Group B: Bids offered by other contractors.

All evaluated Bids in each group shall, as a first evaluation step, be compared to determine the Bid with lowest evaluated cost, and the Bid with the lowest evaluated cost in each group shall be further compared with each other. If as a result of this comparison, a Bid from Group A is the lowest, it shall be selected for the award, if the Bidder is determined qualified. If a Bid from Group B is the lowest, as a second evaluation step, all bids from Group B shall then be further

compared with the lowest evaluated cost from Group A. For the purpose of this further comparison only, an amount equal to 7.5% (seven and half percent) of the respective Bid price of Group B corrected for arithmetical errors, including unconditional discounts but excluding provisional sums and the cost of day works, if any, shall be added to the evaluated cost offered in each Bid from Group B. If the Bid from Group A is the lowest, it shall be selected for award. If not, the Bid offering the lowest evaluated cost from Group B based on the first evaluation step shall be selected, if the Bidder is determined qualified.

2. Successful Bid or Bids & Evaluation

In continuation and accordance with ITB 40, the Employer shall use the criteria and methodologies listed in this Section to evaluate Bids. By applying these criteria and methodologies the Employer shall determine the Successful Bid or Bids which has/have been determined to:

- (a) be substantially responsive to the Bidding document;
- (b) offer the lowest evaluated cost to the Employer for all works to be procured based on either a single Contract or all multiple Contracts combined, as the case may be, in accordance with the ITB 14.6 inviting bid prices and discounts, and provisions made of the Bidding Document for evaluation of bids and award of contract (s); and
- (c) be offered by Bidder or Bidders that substantially meet the qualification criteria applicable for Contract or combined Contracts for which they are selected.

2.1 Evaluation (ITB 35)

In addition to the criteria listed in ITB 35.2 and BDS, the following criteria shall apply:

- (i) Assessment of adequacy of Technical Proposal with Requirements (Reference ITB 16 and ITB 29.3): The Employer will determine whether the Bids are substantially responsive to the Technical Requirements.
 - Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VII, Works' Requirements
- (ii) Assessment of adequacy of Commercial Terms and Conditions of the Bid (Reference ITB 29.4): The Employer will determine whether the Bids are substantially responsive to the Commercial and Contractual Terms and Conditions.
- (iii) 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

2.2 Single and Multiple Contracts

Pursuant to ITB 14.6, and ITB 35.4 and in accordance with how bids are invited either for "Works" or Works are grouped in lots (contracts) or packages (one or more lots) and bids are invited for multiple lots or packages, evaluation and award will be as follows:

Award Criteria for a Single Contract:

'Works'

Evaluation and Award Criteria for 'Works' as One (Single) Contract: The bids will be evaluated for 'Works' and the contract will be awarded to the Bidder offering the lowest evaluated cost to the Employer for 'Works', subject to the selected Bidder substantially meeting the required qualification criteria for the contract, and determination of substantial responsiveness of the Bid.

2.3 Alternative Completion Times

"Alternative time for completion is not permitted. Bids offering completion time longer than that specified under Part A-Contract Data under Section IX-Particular Conditions of Contract shall be rejected."

2.4 Sustainable Procurement: Based on the following main considerations:

- i) Socio-economic consideration
- ii) Environmentally and Socially Responsible Procurement

2.5 Alternative Technical Solutions for specified parts of the Works

This is not allowed.

2.6 Specialized Subcontractors

If permitted under ITB 34, only the specific experience of Subcontractors for specialized works permitted by the Employer will be considered. The general experience and financial resources of the Specialized Subcontractors shall not be added to those of the Bidder for purposes of qualification of the Bidder.

3. Qualification

No.				Joint Ven	ture (existing or	intended)	Submission
No.	Subject	Subject Requirement	Single Entity	All Members Combined	Each Member	One Member	Requirements
1. Eligil	bility						
1.1.1	Nationality	Nationality in accordance with ITB 4.4	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid & Forms ELI – 1.1 and 1.2, with attachments
1.1.2	Eligibility of Materials, Equipment and Services	Country of Origin in accordance with ITB 5	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid & Form ELI-1.3
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	Bank Eligibility	Not having been declared ineligible by the Bank, as described in ITB 4.5.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.4	State- owned Enterprise or Institution of the Borrower country	Meets conditions of ITB 4.6	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.5	United Nations resolution or Borrower's country law	Not having been excluded as a result of prohibition in the Borrower's country laws or official regulations against commercial relations with the	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments

				¥ ¥7			
No.	Subject	Requirement	Single Entity	All Members Combined	Each Member	One Member	Submission Requirements
		Bidder's country, or by an act of compliance with UN Security Council resolution, both in accordance with ITB 4.8 and Section V.					
2. Histo	orical Contract N	on-Performance					
2.1	History of Non- Performing Contracts	Non-performance of a contract that ¹ did not occur as a result of contractor default since 1 st January 2018	Must meet requirement	Must meet requirements	Must meet requirement ²	N/A	Form CON-2
2.2	Suspension Based on Execution of Bid Securing Declaration by the Employer or withdrawal of the Bid within Bid validity period or other failures	Not under suspension based on-execution of a Bid Securing Declaration or other failures pursuant to ITB 4.7 and ITB 19.9	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid

Non-performance, as decided by the Employer, shall include all 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. Non-performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.

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

				Joint Vent	Joint Venture (existing or intended)		
No.	Subject	Requirement	Single Entity	All Members Combined	Each Member	One Member	Submission Requirements
2.3	Pending Litigation	Bid's financial position and prospective long-term profitability still sound according to criteria established in 3.1 below and assuming that all pending litigation will be resolved against the Bidder	Must meet requirement	N/A	Must meet requirement	N/A	Form CON – 2
2.4	Litigation History	No consistent history of court/arbitral award decisions against the Bidder ³ since 1 st January 2018	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON – 2

³ The Bidder shall provide accurate information on the related Bid Form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of awards against the Bidder or any member of a joint venture may result in failure of the Bid.

				Joint Ven	ture (existing or	intended)			
No.	Subject	Requirement	Single Entity	All Members Combined	Each Member	One Member	- Submission Requirements		
2.5	Declaration: Environment al and Social (ES) past performance	Declare any civil work contracts that have been suspended or terminated and/or performance security called by an employer for reasons related to the noncompliance of any environmental, or social (including sexual exploitation and abuse (SEA) and gender-based violence (GBV)), or health or safety requirements or safeguard in the past five years. ⁴	Must make the declaration. Where there are Specialized Sub-contractor/s, the Specialized Sub-contractor/s must also make the declaration.	N/A	Each must make the declaration. Where there are Specialized Subcontractor/s, the Specialized Subcontractor/s must also make the declaration.	N/A	Form CON-3 ES Performance Declaration		
3. Finan	3. Financial Situation and Performance								
3.1	Financial Capabilities	(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN – 3.1, 3.3 and 3.4 with attachments		

⁴ The Employer may use this information to seek further information or clarifications in carrying out its due diligence.

				Joint Von	ture (existing or	intended)	
No.	Subject	Requirement	Single Entity	All Members Combined	Each Member	One Member	Submission Requirements
		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 200,000,000 for the subject contract(s) net of the Bidder's other commitments (ii) The Bidders 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. (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 <i>Five</i> (5) years shall be submitted and must demonstrate the current soundness of the Bidder's financial position and indicate	Must meet requirement Must meet requirement	Must meet requirement	N/A Must meet requirement	N/A	

				Joint Ven	ture (existing or i	intended)	
No.	Subject	Requirement	Single Entity	All Members Combined	Each Member	One Member	Submission Requirements
		its prospective long-term profitability.					
3.2	Average Annual Construction Turnover	Minimum average annual construction turnover of KES 900,000,000 for the last Five [5] years.	Must meet requirement	Must meet requirement	Must meet 30%, (thirty percent) of the requirement	Must meet 30%, (thirty percent) of the requirement	Form FIN – 3.2
4. Expe	rience						
4.1 (a)	General Construction Experience	Experience under construction contracts in the role of prime contractor, JV member, subcontractor, or management contractor for at least the last Five (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 <i>two</i> similar contracts specified below that have been satisfactorily and substantially ⁵ completed as a prime contractor, joint venture member ⁶ , management contractor or sub-contractor	Must meet requirement	Must meet requirement ⁷	N/A	N/A	Form EXP 4.2(a)

⁵ Substantial completion shall be based on 80% or more works completed under the contract.

⁶ For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder's share, by value, shall be considered to meet this requirement

⁷ In the case of 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. Instead, each contract performed by each member shall satisfy the minimum value of a single contract as required for single entity. In determining whether the JV meets the requirement of total number of contracts, only the number of contracts completed by all members each of value equal or more than the minimum value required shall be aggregated.

				Joint Ven	ture (existing or	intended)	
No.	Subject		Single Entity	All Members Combined	Each Member	One Member	- Submission Requirements
4.2 (b)	Construction Experience in Key Activities	within the last five (5) years from the Application submission deadline. Each contract should have a minimum value of KES 900,000,000.00 (Kenya Shillings Nine Hundred Million) Note: Bidder to provide Legally Certified Completion Certificates for completed Contracts or Letter from the Employer for ongoing Works For the above and any other contracts [substantially completed and under implementation] as prime contractor, joint venture member, or sub-contractor between 1st January 2018 and Bid submission deadline, a minimum construction experience in the following key activities successfully completed8:	Must meet requirements	Must meet requirements	N/A	N/A	Form EXP – 4.2 (b)

⁸ 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.

				Joint Vent	ure (existing or	intended)	Chii
No.	Subject	Requirement	Single Entity	All Members Combined	Each Member	One Member	Submission Requirement
		i. Construction of conventional Water treatment plant with capacity greater than 4,000 m³/day;					
		ii. Laying of DN 250 – DN315 water pipelines at a rate of 10km per month					
		iii. Laying of DN250 – DN300 sewer pipeline at a rate of 8km per month					
		iv. Construction of 225m3 Reinforced Concrete Storage Tank					
		v. Completion of 1,000No. water and 500No. sewer consumer connection					
		Note: For all the above Key Activities, Bidder to give the name, location (country and city) and description of the urban area where the Works were carried out and a copy of Legally Certified					

				Joint Ven	ture (existing or	intended)	G. h'.
No.	Subject	Requirement		All Members Combined	Each Member	One Member	- Submission Requirements
		Supporting Letter signed by the Employer.					
4.2 (c)	Specific Experience in managing ES aspects	For the contracts in 4.2 (a) above and/or any other contracts [substantially completed and under implementation] as prime contractor, joint venture member, or Subcontractor between 1st January 2018 and Bid submission deadline, experience in managing ES risks and impacts in the following aspects: As in the Works' Requirements - Environmental and Social (ES) requirements	Must meet requirements	Must meet requirement	N/A	N/A	Form EXP – 4.2 (c)

		1.	Environmental,	Social, Health a			
				Joint Vei	nture (existing	or intended)	
	Criterion	Requirement	Single Entity	All Parties Combined	Each Member	One Member	Submission Requirements
5.1	ESHS Certificatio n(s)	Availability of a valid ISO certification or internationally recognized equivalent (equivalency to be demonstrated by Bidder), and applicable to the worksite: ✓ Quality management certificate ISO 90019; ✓ Environmental management certificate ISO 14001¹0; ✓ Health and safety management certificate ISO 45001¹¹1.	Must meet requirement	N/A	N/A	Leader must meet requirement	Form CER Form CER Form CER
5.2	ESHS Documentat ion	Availability of in-house policies and procedures acceptable to the Employer for ESHS management: 1. Existence of an Ethics Charter; 2. Existence of a system for monitoring compliance with ESHS commitments for the Bidder's subcontractors and all its partners;	Must meet requirement	N/A	N/A	Leader must meet requirement	 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.

The ISO 9001 certification covers the principles of quality management, including a strong customer focus, motivation and commitment of management, process approach and continuous improvement.

 $^{^{10}}$ The ISO 14001 certification defines the criteria for an environmental management system.

¹¹ The ISO 45001 certification defines a management system for health and safety at work with the overall objective of preventing the occurrence of work related injuries and diseases among workers and providing safe and healthy workplaces.

		1.	Environmental,	Social, Health an	nd Safety (ESH	S)	
				Joint Ven	ture (existing o	or intended)	
	Criterion	Requirement	Single Entity	All Parties Combined	Each Member	One Member	Submission Requirements
		3. Existence of official company procedures for the management of the following relevant points:					3. Official internal procedure documents on the topics indicated must be provided.
		☑ ESHS resources and facilities and ESHS monitoring organization;					
		☑ Project Areas management (base camps, quarries, borrow pits, storage areas);					
		☑ Health & Safety on worksites;					
		✓ Local recruitment and ESHS trainings of local staff (capacity building), ESHS trainings of subcontractors and local partners (transfer of knowledge);					
		☑ Traffic Management					
		☑ Atmospheric emissions, noise and vibrations					
		☑ Site rehabilitation and revegetation;					
5.3	Similar Experience	Experience of <i>Two (2)</i> construction contracts in developing and emerging countries over the last <i>Ten (10)</i> years, where major ESHS measures were carried out or are on	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)

	1. Environmental, Social, Health and Safety (ESHS)						
	Criterion	Requirement	Single Entity	Joint Venture (existing or intended)			
				All Parties Combined	Each Member	One Member	Submission Requirements
		progress satisfactorily and in compliance with international standards.					
5.4	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)

4. Contractor's Representative and Key Personnel

The Bidder must demonstrate that it will have a suitably qualified Contractor's Representative and suitably qualified (and in adequate numbers) Key Personnel, as specified in the Works Requirements.

The Bidder shall provide details of the Contractor's Representative and Key Personnel and such other Key Personnel that the Bidder considers appropriate to perform the Contract, together with their academic qualifications and work experience. The Bidder shall complete the relevant Forms in Section IV, Bidding Forms.

[Note: Insert in the following table, the minimum key specialists required to execute the contract, taking into account the nature, scope, complexity and risks of the contract.

Where Project SEA risks are assessed to be substantial or high, the Employer shall include a Sexual Exploitation, Abuse and Harassment expert(s).]

Contractor's Representative and Key Personnel

Item No.	Position/Specialization	Relevant Academic Qualifications	Minimum Years of Relevant Work Experience
1	Project Director/Contractor's Representative	Degree in Civil Engineering. Water Engineering, Or Equivalent	10 Years
2	One (1) Project/Contract Manager	Civil Engineering Degree Registered with EBK Or Equivalent	7 Years
3	One (1) Site Agent	(Civil Engineering Degree & Registered with EBK Or Equivalent)	7 Years
4	Two (2) Assistant Site Agents One (1) For Intake and Water Treatment Works - One (1) For Water Pipelines and Water Reservoirs.	All Civil Engineering Degree and Graduate Engineers with EBK or equivalent	3 Years
5	One (1) Water Treatment Process Engineer	Civil Engineering Degree and Registered with EBK or equivalent	5 Years
6	Electromechanical Engineer	Degree in Electrical/ Mechanical Engineering and Registered with EBK or equivalent.	10 Years

7	Three (3) Construction Supervisors	Diploma in Water or Civil Engineering, Or Equivalent)	3 Year
8	One (1) Surveyor	Degree in Surveying - Registered with ISK Or Equivalent	5 Years
9	One (1) Assistant Surveyor	With Minimum Ordinary Diploma (Ond) in Surveying	3 Years
10	Environmentalist	A Degree in Environmental Sciences or Equivalent and Registered Lead Expert with Nema.	5 Years
11	Occupational Safety and Health Officer	A First Degree and Course in Occupational Safety and Health	5 Years
12	2 No. Sociologists	A Degree in Social Sciences or Community Development	4 Years
13	Sexual Exploitation, Abuse and Harassment Officer.	Degree in Social Science with experience in handling gender-based issues.	5 Years

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.

Personnel for the listed positions should either:

- Be fluent in written and spoken English or
- At least one interpreter who is fluent in written and spoken English shall be provided by the contractor for every four personnel who are themselves not fluent in written and spoken English.

5. Equipment

The Bidder must demonstrate that it has the key equipment listed hereafter:

[Specify requirements for each lot as applicable]

No.	Equipment Type and Characteristics	Minimum Number required
1.	Hydraulic Excavator Cat 322 Or Equivalent with Rock Hammer	5

2.	Low Loader 30t Capacity	3
3.	7–10-ton lorries	5
4.	15-ton tippers	<u>5</u>
5.	Motor Graders (3.6m blade)	2
6.	Concrete Mixers (> 2m³/hr)	3
7.	Concrete dumpers (> 0.75m ³)	3
8.	Concrete Poker vibrators (35-40mm)	10
9.	Air compressor (with > 8 Jack hammers)	5
10.	Mobile rubber tyred Crane (5 ton)	2
11.	Storm water drainage pumps (> 3m³/min.)	2
12.	Generators - >15kVA;	1
13.	Water Tanker 9000l Capacity	6
14.	Double drum pedestrian roller	3
15.	Bulldozer D8	2
16.	Backhoe loader	4
17.	Wheel loader	3
18.	Butt Fusion Machine of various Diameters	6

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

Section IV - Bidding Forms

Table of Forms

Letter of Bid	57
Appendix to Bid: Schedule of Adjustment Data	60
Bill of Quantities Error! Bookmarl	k not defined.
Daywork Schedule	67
Summary of Specified Provisional Sums Error! Bookmarl	k not defined.
Technical Bid	71
Technical Bid-Base Bid	72
Site Organization	73
Method Statement	74
Mobilization Schedule	75
Construction Schedule	76
ES Management Strategies and Implementation Plans	77
Form EQU: Equipment	82
Bidders Qualification without prequalification	89
Form CON – 2	94
Form CON – 3	97
Environmental and Social (ES) Performance Declaration	97
Form FIN – 3.1: Financial Situation and Performance	99
Form FIN – 3.2: Average Annual Construction Turnover	101
Form FIN – 3.3: Financial Resources	102
Form FIN – 3.4: Current Contract Commitments / Works in Progress	103
Form EXP - 4.1: General Construction Experience	105
Form EXP - 4.2(a): Specific Construction and Contract Management Experience	e106
Form EXP - 4.2(b): Construction Experience in Key Activities	109
Form EXP - 4.2(c): Specific Experience in Managing ES aspects	111
Form of Bid Security - Demand Guarantee	112
Form of Bid-Securing Declaration.	114

Letter of Bid

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Date of this Bid submission: [insert date (as day, month and year) of Bid submission]

OCBI/LCB No..: [insert number of bidding process as per procurement plan]

Invitation for Bid No.: [insert same IFB number as advertised]

Alternative No.: [insert identification No if this is a Bid for an alternative]

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

We, the undersigned, declare that:

(g)

- (a) **No reservations:** We have examined and have no reservations to the bidding document, including Addenda issued in accordance to ITB 8;
- (b) **Eligibility of Bidder:** We, including any subcontractors or suppliers for any part of the Contract, have nationalities from eligible countries and meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) **Eligibility of Materials, Equipment and Services**: We meet the eligibility requirements for Materials, Equipment and Services in accordance with ITB 5;
- (d) **Bid-Securing Declaration:** 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 4.7;
- (e) Conformity: We offer to execute in conformity with the bidding document and in accordance with the construction schedule the following Works: Construction Works for Mwala Cluster Water Supply Project.
- (f) Bid Price: The total price of our Bid, excluding any discounts offered in item (g) below is: [Insert one of the options below as appropriate]

_	
(i)	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 .
,	•
	otion 1, in case of one Contract for 'Works':] Total price is: <u>[insert the total price of the Bia</u> words and figures, indicating the various amounts and the respective currencies];
Disc	ounts: The discounts offered and the methodology for their application are:

(i) The discounts offered are: [Specify in detail each discount offered.]

- (ii) The exact method of calculations to determine the net price of each item and 'Works', and in case of multiple lots or multiple packages, net price of each item, each lot and each package after application of discounts is shown below: [Specify in detail the method that shall be used to apply the discounts and ensure clarity, unambiguity, etc. in accordance with ITB 14.7];
- (h) **Bid Validity Period**: Our Bid shall be valid for a period of **120days** from the date of Bid submission deadline specified in BDS 22.1 and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (i) **Performance Security**: If our Bid is accepted, we commit to obtain a Performance Security in the forms in accordance with the bidding document;
- (j) **One Bid Per Bidder:** We are not submitting any other Bid(s) as an individual Bidder, and we are not participating in any other Bid(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITB 4.3, other than alternative Bids submitted in accordance with ITB 13;
- (k) Suspension and Debarment: We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Bank or a debarment imposed by the Bank in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the Bank and other development banks. Further, we are not ineligible under the Employer's country laws or official regulations or pursuant to a decision of the United Nations Security Council;
- (1) **State-owned enterprise or institution:** [select the appropriate option and delete the other] [We are not a state-owned enterprise or institution] / [We are a state-owned enterprise or institution but meet the requirements of ITB 4.6];
- (m) Commissions, gratuities, fees: We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: [insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate "none.");

(n) **Binding Contract:** We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;

Section	IV: Bidding	Forms	Page	58

- (o) **Not Bound to Accept**: We understand that you are not bound to accept the lowest evaluated cost Bid, or any other Bid that you may receive;
- (p) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption.
- (q) **Potential DAAB Members:** We hereby propose the following three persons, whose curriculum vitae are attached, as potential DAAB members:

Name	Address
1	
2	
3	

Name of the Bidder: *[insert complete name of person signing the Bid]

Name of the person duly authorized to sign the Bid on behalf of the Bidder: **[insert complete name of person duly authorized to sign the Bid]

Title of the person signing the Bid: [insert complete title of the person signing the Bid]

Signature of the person named above: [insert signature of person whose name and capacity are shown above]

Date signed	[insert date of signing] day of [insert month], [insert year]	
Date signed	day of	,

- * In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder or names of all members (partners) of JV and sign on behalf of the JV and not on behalf of only one member that has been given power of attorney.
- ** Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid. If the Bidder is a JV, the power of attorney shall be given by the JV or by all members of the JV.

Appendix to Bid: Schedule of Adjustment Data

(Applicable only if Prices are subject to adjustment as per ITB 18.3 (a) and Sub-Criteria 13.7 of Part A-Contract Data under PC)

[In Tables A, B, and C, below, the Bidder shall (a) indicate its amount of local currency payment, (b) indicate its proposed source and base values of indices for the different foreign currency elements of cost, (c) derive its proposed weightings for local and foreign currency payment, and (d) list the exchange rates used in the currency conversion.]

Table A. Local Currency

Index code*	Index description*	Source of index*	Base value and date*	Bidder's related currency amount	Bidder's proposed weighting
	Nonadjustable	_	_	_	A:* B:* C:* D:* E:*
			Total		1.00

^{[*} To be entered by the Employer. Whereas "A" should a fixed percentage, B, C, D and E should specify a range of values and the Bidder will be required to specify a value within the range such that the total weighting = 1.00]

Table B. Foreign Currency (FC)

Index code	Index description	Source of index	Base value and date	Bidder's related source currency in type/amount	Equivalent in FC1	Bidder's proposed weighting
	Nonadjustable	_	_	_		A:*
						B:*
						C: <u>*</u>
						D:*
						E:*
				Total		1.00

[* To be entered by the Employer. Whereas "A" should a fixed percentage, B, C, D and E should specify a range of values and the Bidder will be required to specify a value within the range such that the total weighting = 1.00]

Table C. Summary of Payment Currencies

[In case of multiple lots or multiple packages Bidder shall prepare separate table for each lot identified by package number and related lot number]

Table: Alternative A

For [Employer to Select i) or ii) and delete the other] i) Whole of the Works / ii) [Insert name of Section of the Works.] [If ii) is selected, then Employer to prepare similar Table C for all sections of works including the summary Table C of all sections to account for whole works under the contract]

	A	В	C	D
Name of payment currency	Amount of currency	Rate of exchange (local currency per unit of foreign)	Local currency equivalent C = A x B	Percentage of Total Bid Price (TBP) 100xC TBP
Local currency		1.00		
Foreign currency #1				
Foreign currency #2				
Foreign currency # 3				
Total Bid Price				100.00
Provisional sums expressed in local currency [If ii) above is selected Employer to specify provisional sums as applicable for each section]	[To be entered by the Employer]	1.00	[To be entered by the Employer]	
TOTAL BID PRICE of (i) or				

(ii) as applicable		
(including		
provisional sum)		

Table: Alternative B

To be used only with Alternative B Prices directly quoted in the currencies of payment. (ITB 15.1)

Summary of currencies of the Bid for *Employer to Select i) or ii) and delete the other* [i) Whole of the Works / ii) Insert name of Section of the Works. *If ii) is selected, then Employer to prepare similar Table C for all sections of works including the summary Table C of all sections to account for whole works under the contract]*

Name of currency	Amounts payable
Local currency:	
Foreign currency #1:	
Foreign currency #2:	
Foreign currency #3:	
Provisional sums expressed in local currency	[To be entered by the Employer] [If ii) above is selected Employer to specify provisional sums as applicable for each section]

Bill of Quantities

A. Preamble

- 1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General and Particular Conditions of Contract, Technical Specifications, and Drawings.
- 2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices bid in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
- 3. The rates and prices bid in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Constructional Plant, labour, supervision, materials, erection, maintenance, insurance, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.
- 4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
- 5. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
- 6. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.
- 7. Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with Sub-Clause 13.5 and Clause 13.6 of the General Conditions.
- 8. The method of measurement of completed work for payment shall be in accordance with [insert the name of a standard reference guide, or full details of the methods to be used].¹

B. Work Items

1. The Bill of Quantities usually contains the following part Bills, which have been grouped according to the nature or timing of the work:

Bill No. 1—General Items;
Bill No. 2—Earthworks;
Bill No. 3—Culverts and Bridges;
Bill No. 4—etc., as required;

¹ The method of measurement should be spelled out precisely in the Preamble to the Bill of Quantities, describing for example the allowances (if any) for timbering in excavation, etc. Many national standard reference guides have been prepared on the subject, and one such guide is the Standard Method of Measurement of the U.K. Institution of Civil Engineers.

Summary Bill of Quantities.
 If BDS-ITB 15.1 (a) applies, Bidders shall price the Bill of Quantities in local currency only and shall indicate in the Appendix to Bid the percentage expected for payment in foreign currency or currencies. If BDS-ITB 15.1 (b) applies Bidders shall price the Bill of Quantities in the applicable currency or currencies.

Daywork Schedule; and

Daywork Schedule

General

1. Reference should be made to Sub-Clause 13.6 of the General Conditions. Work shall not be executed on a daywork basis except by written order of the Engineer. Bidders shall enter basic rates for daywork items in the Schedules, which rates shall apply to any quantity of daywork ordered by the Engineer. Nominal quantities have been indicated against each item of daywork, and the extended total for Daywork shall be carried forward as a Provisional Sum to the Summary Total Bid Amount. Unless otherwise adjusted, payments for daywork shall be subject to price adjustment in accordance with the provisions in the Conditions of Contract.

Daywork Labour

- 2. In calculating payments due to the Contractor for the execution of daywork, the hours for labour will be reckoned from the time of arrival of the labour at the job site to execute the particular item of daywork to the time of return to the original place of departure, but excluding meal breaks and rest periods. Only the time of classes of labour directly doing work ordered by the Engineer and for which they are competent to perform will be measured. The time of gangers (charge hands) actually doing work with the gangs will also be measured but not the time of foremen or other supervisory personnel.
- The Contractor shall be entitled to payment in respect of the total time that labour is employed on daywork, calculated at the basic rates entered by the Contractor in the Schedule of Daywork Rates:
 Labour, together with an additional percentage payment on basic rates representing the Contractor's profit, overheads, etc., as described below:
 - (a) The basic rates for labour shall cover all direct costs to the Contractor, including (but not limited to) the amount of wages paid to such labour, transportation time, overtime, subsistence allowances, and any sums paid to or on behalf of such labour for social benefits in accordance with [country of Borrower] law. The basic rates will be payable in local currency only.
 - (b) The additional percentage payment to be quoted by the bidder and applied to costs incurred under (a) above shall be deemed to cover the Contractor's profit, overheads, superintendence, liabilities, and insurances and allowances to labour, timekeeping, and clerical and office work, the use of consumable stores, water, lighting, and power; the use and repair of stagings, scaffolding, workshops, and stores, portable power tools, manual plant, and tools; supervision by the Contractor's staff, foremen, and other supervisory personnel; and charges incidental to the foregoing. Payments under this item shall be made in the following currency proportions:

(i)	foreign:	percent (to be stated by bidder). ²
(ii)	local:	percent (to be stated by bidder).

Section IV: Bidding	Forms	Page	67
Section IV. Diading	1 011113		0,

The bidder shall state the percentage in a common foreign currency equivalent required for payment and the exchange rates and official sources used.

Daywork Materials

- 4. The Contractor shall be entitled to payment in respect of materials used for daywork (except for materials for which the cost is included in the percentage addition to labour costs as detailed heretofore), at the basic rates entered by the Contractor in the Schedule of Daywork Rates: 2. Materials, together with an additional percentage payment on the basic rates to cover overhead charges and profit, as follows:
 - (a) the basic rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damage, losses, etc., and shall provide for delivery to store for stockpiling at the Site. The basic rates shall be stated in local currency, but payment will be made in the currency or currencies expended upon presentation of supporting documentation.
 - (b) the additional percentage payment shall be quoted by the bidder and applied to the equivalent local currency payments made under (a) above. Payments under this item will be made in the following currency proportions:

(i)	foreign:	percent (to be stated by the bidder); ³
(ii)	local:	percent (to be stated by the bidder);

(c) the cost of hauling materials for use on work ordered to be carried out as daywork from the store or stockpile on the Site to the place where it is to be used will be paid in accordance with the terms for Labour and Construction in this schedule.

Daywork Contractor's Equipment

- 5. The Contractor shall be entitled to payments in respect of Contractor's Equipment already on Site and employed on daywork at the basic rental rates entered by the Contractor in the Schedule of Daywork Rates: 3. Contractor's Equipment. Said rates shall be deemed to include due and complete allowance for depreciation, interest, indemnity, and insurance, repairs, maintenance, supplies, fuel, lubricants, and other consumables, and all overhead, profit, and administrative costs related to the use of such equipment. [Note to the Employer: This is an example of wording to include overhead and profit, etc., in the daywork rates. A separate percentage addition could be used as for labour and materials.] The cost of drivers, operators, and assistants will be paid for separately as described under the section on Daywork Labour. [Note to the Employer: An alternative, sometimes adopted for administrative convenience, is to include the cost of drivers, operators, and assistants in the basic rates for Contractor's Equipment. The last sentence of this paragraph 5 should then be modified accordingly.]
- 6. In calculating the payment due to the Contractor for Contractor's Equipment employed on daywork, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the travelling time from the part of the Site where the Contractor's Equipment was located when ordered by the Engineer to be employed on daywork and the time for return journey thereto shall be included for payment.

Section IV: Biddin	g Forms	Page	68

The bidder shall state the percentage in a single foreign currency equivalent and the exchange rates and official sources used.

(a)	foreign:	percent (to be stated by the bidder). ⁴
(b)	local:	percent (to be stated by the bidder).

Section IV: Bidding Forms _____ Page | 69

used.

Construction Works For Kitui and Matuu Towns Last Mile Connectivity of Water and Sanitation in Tanathi Water Works Development Agency Areas

GRAND SUMMARY

Bill No.	Item Description	AMOUNT (KSHS)
1.0	Preliminary and General Items	
2.0	Matuu Summary	-
3.0	Kitui Summary	-
4.0	Wote summary	-
	Sub-Total	-
	Add 10% Contigency	-
	Grand Total(exclusive of VAT)	-

Construction Works For Kitui and Matuu Towns Last Mile Connectivity of Water and Sanitation in Tanathi Water Works **Development Agency Area** Dayworks Unit Rate (Ksh) Item Description Unit Nominal Amount (Ksh) No. Quantity 2.1 **Class of Labour** 100 labour - unskilled hr 2 labour - semi-skilled hr. 100 3 drillers - jackhammers hr. 100 4 drillers - air tracks 100 hr. 100 5 drillers - rotary crawler over 150 mm hr. _ 100 6 powder-men hr. -7 carpenters hr. 100 100 8 reinforcing steel fixers hr. 100 concrete workers 9 hr. masons, concreters, bricklayers 100 10 hr. _ 11 plasterers hr. 100 -12 painters hr. 100 100 13 plumbers hr. 14 100 electricians hr. _ 15 welders 100 hr. -16 fitters 100 hr. 2.2 **Equipments** 17 truck drivers - 3 t to 6 t 100 hr. truck drivers - 15 t 100 18 hr. _ 19 truck drivers - 50 t 100 hr. 20 Tractors operators -heavy (above 200 hr. 100 100 tractors operators - hght (under 200 21 hr. _ 22 front-end loader operators - 2 to 3m³ hr. 100 100 23 front-end loader operators - 5 to hr. 24 shovel operator - 2 m3 hr. 100 100 25 shovel operator - 5 m3 hr. 100 26 roller drivers hr. -100 27 mobile crane operators hr. 100 28 compressor & pump attendants hr. _ 29 crusher / screening plant operator hr. 100 100 30 batch mixer hr. 100 31 plant operator hr. _ 100 32 oiler, greasers hr. mechanics - up to 10 years experience 100 33 hr. 34 mechanics - over 10 years experience 100 hr. 200 35 Storeman and gangers hr.

PAGE TOTAL CARRIED FORWARD TO COLLECTION SHEET

Construction Works For Kitui and Matuu Towns Last Mile Connectivity of Water and Sanitation in Tanathi Water Works Development Agency Area						
tem	Description	Day Unit	works Nominal	Unit Rate (Ksh)	Amount (Ksh)	
No.			Quantity			
2.3	MATERIALS					
1	ordinary Portland cement - bagged	Tons	5		-	
2	ordinary Portland cement - bulk	Tons	5		-	
3	fine aggregate	m ³	15		-	
4	coarse aggregate	m ³	10		-	
5	concrete mix at central batch plant characteristic strengt 20 MPa, slump 80mm	m ³	10		-	
6	reinforcing steel	Tons	2		-	
7	reinforcing fabric	Tons	2		-	
8	structural steel	Tons	2		-	
9	explosive - gelatine	Tons	1		-	
10	explosive - ammonium nitrate	Tons	1		-	
11	timber - primary hardwood	m ³	5		-	
12	timber - secondary hardwood	m ³	5		-	
13	waterproof plywood - 7.5 mm	m ³	5		-	
14	waterproof plywood - 15 mm	m ³	5		-	
15	waterproof plywood - 20 mm	m ³	5		-	
	PAGE TOTAL CARRIED FORWARD TO COL	LECTION	N SHEET		-	

Const	ruction Works For Kitui and Matuu Towns La Deve	st Mile Co lopment	onnectivity of Wat Agency Area	er and Sanitation in T	anathi Water Works
		Dayw	orks .		
ltem No.	Description	Unit	Nominal Quantity	Unit Rate (Ksh)	Amount (Ksh)
Const	ruction Works For Kitui and Matuu Towns La Devel	st Mile Co	onnectivity of Wat Agency Areas	er and Sanitation in T	anathi Water Works
		Dayw	orks ON PAGE		
ITEM	DESCRIPTION	OLLECTI	ON PAGE		AMOUNT(KSHS)
1	Total Collection Page 1				AWOUNT(KSHS)
	- Otal General Age				
2	Total Collection Page 2				-
-					
TO=::					
TOTAL I	BILL				-

	BILL NO. 1 - PRELIMIN	NARY AN	D GENERAL ITEMS		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	CLASS A - GENERAL ITEMS				
	Contractual Requirements		4.00		
11A110	Perfomance Security	Item	1.00		-
11A120.1	Insurance for Works and Contractor's Equipment	Item	1.00		-
11A120.2	Insurance for Contractor's Equipment as	Item	1.00		-
	Insurance against Injury to Third Party Persons and Damage Contractor's Equipment as	Item	1.00		-
	Specified Requirements				
	Offices and Accomodation for Engineer's Staff				
	omees and Accommodation for Engineer's Stan				
1A211.1	Provide a provisional sum of Kshs. 2,500,000 for the renting of Engineer's site office.	L-Sum	1.00		-
	Provide a provisional sum of Kshs. 1,000,000 for				
	Laboratory testing as and when required. The Contractor to make available for independent testing of works sample by the Engineer. The Contractor may be required to witness the testing.	L-Sum	1.00		-
1A211.3	Allow a P.C. Sum of Kshs. 100,000 per month for provision of furnished Accommodation for the use of the Resident Engineer, including day & night security, House Cleaner, Crockery, Electricity, Water Supply, Beddings etc. All to the satisfaction of the Engineer.	Months	25.00		-
1A211.4	Ditto but Kshs 80,000 for Assistant Resident Engineer	Months	48.00		-
1A211.5	Ditto but Kshs 50,000 for Inspector of works (2Nr), CAD Tecnhician (1 Nr), Lab tech (1 Nr)	Months	72.00		-
1A211.6	Ditto but Kshs 30,000 Engineers subordinate staff; Secretary, driver (4 Nr), cleaner, office attendant (2 Nr)	Months	144.00		-
1A211.7	Contractors Overheads and Profit for Provisional Sums Items 1.11-1.16 Services for Engineer's Staff	%	-		-
1A221.1	Provisional Sum for maintenance, running, servicing and insurance costs of seconded Project vehicles as directed by the Engineer	km	500,000.00		-
1A221.2	Allow a provisional sum for final repairs and rehabilitation of the vehicles (Item A221.1) before they revert to Employer at the end of the contract.	PS			2,000,000.00
	% Adjustment to the provisional sum for Items A211.1 to A221.2	%	2,000,000.00		-
	Equipment for Engineer's Staff				
1A231.2	Provisional Sum for monthly maintenance of office equipment (printers, cameras etc) for use by the Engineer's Staff	month	24.00		-
1 / 2 2 1 2	% Adjustment to the provisional sum for Items A231.1 to A231.2	%	-		-
	PAGE 1 TOTAL TAKEN TO P&G COLLECTION PA	GE			2,000,000.00

	BILL NO. 1 - PRELIMINARIES AND GENERAL ITEMS							
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
	Attendance Upon Engineer's Staff							
1A241	Sum for attendance upon Engineer's Staff by drivers (4No.)	month	96.00		-			
1A242	Sum for attendance upon Engineer's staff by office 2no administrative assistants and 2no chain men	month	96.00		-			
	Testing of Materials and Works							
1A250.1	Provisional sum for testing of materials as specified or directed by the Engineer	sum	500,000.00		500,000.00			
1A250.2	% Adjustment to the provisional sum for Item A250.1	%	500,000.00		-			
1A260.1	Provisional sum for testing of the Works as specified or directed by the Engineer	sum	1,000,000.00		1,000,000.00			
1A260.2	% Adjustment to the provisional sum for Item A260.1	%	0.10		-			
	Project Signboards and Plaque							
	Provision, fixing, maintaining and removal of site							
1A279.1	signboards	nr	4.00		-			
	Other Provisional sums				-			
1A279.4	Provisional Sum Kshs 2,500,000 for fees requested by various authorities and road agencies	sum	1.00		-			
1A279.5	% Adjustment to the provisional sum for Item A279.4	%	0.10	-	-			
	PAGE 2 TOTAL TAKEN TO P&G COLLECTION PA	GE			1,500,000.00			

	BILL NO. 1 - PRELIMINARIES AND GENERAL ITEMS						
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)		
	Method Related Charges						
	In addition to the items listed hereunder, a tenderer is to insert such items as he may decide to cover, items of work relating to his intended method of executing the works, costs of which are not to be considered as allowed in the rates and prices for the other items.						
	Accomodation, Buildings and Services						
1A310	Establish, maintain and remove Contractor's camp including offices, stores, laboratories, cabins, canteens etc and services including electricity, water, security, transport, staff welfare etc	sum					
1A41*.3	Allow a provisional sum of Kshs. 5,000,000 to cover cost for capacity building, training, internship and continous professional development as per the provisions of the EBK/IEK guidelines for Project Manager's staff seconded to the project to be expended by the project manager.	PS			5,000,000.00		
1A41*.4	Allow a Provisional sum of Kshs. 3,000,000 to cater for monthly site meetings, as directed by the project manager	PS			3,000,000.00		
1A 420.2	Allow a Provisional sum of Kshs. 2,000,000 for the furnishing and equipping of a water quality analysis laboratory as directed	PS			2,000,000.00		
1A42.2	Allow a Provisional sum Kshs. 3,000,000 for implementing safeguards/ESMP while undertaking the work. Item to be used in conjuction with other water service providers.	P.S			3,000,000.00		
1A42*.3	Allow a Provisional sum of KES 500,000, to be spent in whole or part, for HIV/AIDS prevention activities and campaigns to be spent as directed by the Engineer	PS			500,000.00		
	PAGE 3 TOTAL TAKEN TO P&G COLLECTION PA	GE			13,500,000.00		

	BILL NO. 1 - PRELIMINARIES AND GENERAL ITEMS							
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
1A42*7	Provisional for undertaking works under the day works bill as instructed by the Engineer.	LS	1.00					
1A42*8	P.C. Sum Kshs. 5,000,000 for Inspection and Witness Testing of Pipes, Fittings and Equipment at manufacturer's premises by the Employer, Engineer and their representatives to be expended as directed by the Engineer	Item	PC		5,000,000.00			
	PAGE 4 TOTAL TAKEN TO P&G COLLECTION PA	GE			5,000,000.00			

DESCRIPTION		BILL NO. 1 - PRELIMINARIES AND GENERAL ITEMS						
1 BROUGHT FORWARD FROM PAGE 1 2,000,000.00 2 BROUGHT FORWARD FROM PAGE 3 13,500,000.00 4 BROUGHT FORWARD FROM PAGE 4 5,000,000.00	ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)		
1 BROUGHT FORWARD FROM PAGE 1 2,000,000.00 2 BROUGHT FORWARD FROM PAGE 3 13,500,000.00 4 BROUGHT FORWARD FROM PAGE 4 5,000,000.00		BILL 1 SECTION COLLECTION PAGE						
2 BROUGHT FORWARD FROM PAGE 2 1,500,000.00 3 BROUGHT FORWARD FROM PAGE 3 13,500,000.00 4 BROUGHT FORWARD FROM PAGE 4 5,000,000.00								
2 BROUGHT FORWARD FROM PAGE 2 1,500,000.00 3 BROUGHT FORWARD FROM PAGE 3 13,500,000.00 4 BROUGHT FORWARD FROM PAGE 4 5,000,000.00	4	DROUGHT FORWARD FROM DACE 4				2 000 000 00		
3 BROUGHT FORWARD FROM PAGE 3 13,500,000.00 4 BROUGHT FORWARD FROM PAGE 4 5,000,000.00	-	BROUGHT FORWARD FROM PAGE 1				2,000,000.00		
4 BROUGHT FORWARD FROM PAGE 4 5,000,000.00	2	BROUGHT FORWARD FROM PAGE 2				1,500,000.00		
4 BROUGHT FORWARD FROM PAGE 4 5,000,000.00	2	DROUGHT FORWARD FROM DACE 2				42 500 000 00		
	3	BROUGHT FORWARD FROM PAGE 3				13,500,000.00		
PAGE TOTAL TAKEN TO, GRAND SUMMARY 22,000,000.00	4	BROUGHT FORWARD FROM PAGE 4				5,000,000.00		
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00			<u> </u>					
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
PAGE TOTAL TAKEN TO GRAND SUMMARY 22,000,000.00								
		PAGE TOTAL TAKEN TO GRAND SUMMARY				22,000,000.00		

	BILL NO. 2 MATUU WATER SUPPLY SUMMARY					
BILL NO.	DESCRIPTION	AMOUNT (KShs)				
2.1	Intake Works	, ,				
2.2	Water Treatment Works					
2.2	water freatment works					
2.3	Water Distribution Pipelines					
2.3.1	Raw water rising main					
2.3.2	Treated water rising main					
2.3.3	Water Transmission & Distribution Pipelines					
2.4	Water Storage Tanks					
2.5	Consumer Connections - Water					
2.6	Electrical Mechanical Water Supply					
2.7	Solar farm					
2.8	Guard house	-				
	TOTAL	-				

	BILL No. 2.1 MATUU INTAKE WORKS							
			Co	ntities				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
	CLASS A: GENERAL ITEMS							
	Specified Requirements							
а	Supply material and construct a 1mx 1m intake chamber depth n.e. 2m of reinforced concrete grade 25 Rate to include any excavation and backfilling. Valve chamber to be fitted with locable steel cover. The inlet works to be fitted with coarse and fine screens	sum	1					
	Bill 2.1 TOTAL CARRIED TO COLECTION PAGE							

	BILL 2.2 - TREATMENT WORKS							
	DILL NO. 0.04. TREATMENT WORKS SITE							
	BILL NO. 2.2.1 - TREATMENT	WORKS	SIIE					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
D	DEMOLITION AND SITE CLEARANCE							
	Site clearance of proposed treatment works site; trees to be cleared to be identified by the Engineer: Rate to include for carting away all cleared material.							
D100	General clearance	ha	1.00					
D210	Cutting of trees, removal of stumps with holes backfilled with excavated material. Tree girth, 500mm - 1m (Provisional)	nr	100.00					
	BILL 2.2.1 TOTAL TAKEN TO BILL 2.2 SUMMARY PAGE	<u> </u>						

ITEM	BILL NO. 2.2.2 - FLOCCULATION BASIN DESCRIPTION		QTY		AMOUNT (KShs
I I E IVI	DESCRIPTION	UNIT	QIT	KATE (KSIIS)	AWOUNT (KSns
	CLASS A: General Items				
A6	Leak proof testing				
A652	Allow for leak proof testing of Flocculation Basin & flocculated	Item	L.S		
	water channel as specified				
E	CLASS E: EARTHWORKS				
E4	GENERAL EXCAVATION				
E410	Excavate 200mm top soil and dispose	m2	250.18		
E445.2	Excavate in class III material max. depth 2 - 5 m for disposal	m3	612.95		
E405.4	5.4.0.5.6		000.00		
E435.1	Extra over excavation, depth 2 -5m for re-use	m3	262.69		
E6	FILLING AND COMPACTION				
E6112	Hardcore Using imported Class I material.	m3	75.00		
F	IN-SITU CONCRETE				
F3	Provision and placing of concrete.				
	Rates to include supplying, mixing, placing, vibrating,				
	curing etc. Provision for strength test in				
	accordance with the specification				
	Concrete Grade:15 Blinding				
F323	20 mm aggregate	М3	20.00		
	Provide Concrete Grade: 20 Bases, Footing, Beams, Walls,				
E0.40	Suspended Slabs and Roofing slabs	<u> </u>			
F343	20 mm aggregate	m3	10.00		
	Provide Concrete Grade: 25 Bases, Footing, Beams, Walls,				
	Suspended Slabs and Roofing slabs				
F344	20 mm aggregate	m3	150.00		
G	CONCRETE ANCILLARIES				
G2	FORMWORK: FAIR FINISH - INLET CHAMBER				
- 02	Plane vertical				
G243.1	Upstream face of weir width 200 - 400mm	m2	3.00		
G243.2	Fair finish to vertical sides of dosing platform slab width	O	6.00		
	between 200mm and 400mm	m2	6.00		
G245	Ditto but to wall faces exc 1200mm	m2	70.00		
	FLOCCULATION BASIN				
0045	Plane horizontal	0	20.20		
G215	Bottom of walkway slabs, 1.05 metres high Plane vertical	m2	30.38		
G243	Fair finish to vertical sides of mass concrete footing width	 			
0240	between 200mm and 400mm	m2	16.65		
G245	Ditto but to wall faces exc 1200mm	m2	236.68		
G.F.	DEINEODCEMENT				
G5	REINFORCEMENT High yield steel bars to SSRN 126 or 127	 			
G522	Diameter: 8 mm	kg	5,980.00		
G523	Diameter: 10 mm	kg	13,980.00		
G524	Diameter: 12 mm	kg	5,980.00	<u> </u>	
С	JOINTS				
	Open surface joint with filler				
000:	MEN CLAN CONTROL		2.22		
G631	Width of depth: not exceeding 0.5 m.	m2	3.00		
G8	CONCRETE ACCESSORIES	1			
	Finishing of top surfaces	 			
G812.1	40mm screed, steel trowel finish to top face of slab	m2	237.32		
G812.1	Ditto 10mm render to 100mm walls	m2	300.00		
	AGE 2 TOTAL CARRIED TO BILL 2.2.2 COLLECTION SHEET	1114	555.00	1	

17	BILL NO. 2.2.2 - FLOCCULATION BASIN	AND IN			AMOUNT "COL
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
I	PIPEWORK - PIPES AND FITTINGS - SUPPLY				
	Welded Steel pipes to SSRN 216 externally & Internally fusion bonded Epoxy to SSRN 241				
	bolided Epoxy to GOTTN 241				
10.1.4.11	Bends		1.00		
l314.4k	Long radius, 90 degrees, n.b. 150 mm.	nr	4.00		
	Junctions and Branches				
1345.4r	350x150 Reducing Tee flange	nr	2.00		
	Plain ended and single flanged pieces and bellmouths				
	single flanged socketed pieces, nominal lengths, stated				
I378.4m	Nominal bore: 200 mm, single flange with puddle flange	nr	2.00		
1378.4k	Nominal bore: 350 mm, single flange with puddle flange	nr	8.00		
	Adaptors, collars & couplings				
1385.41	VJ coupling, flexible, n.b. 200 mm	nr	4.00		
1385.4r	VJ coupling, flexible, n.b. 350 mm	nr	6.00		
1911.4m	Valves, penstocks, hydrants, meters,	nr	4.00		
	Sluice valves, Flanged, non-rising spindle, n.b.				
	100- 200mm.				
I911.4p	Sluice valves, Flanged, non-rising spindle, n.b. 350 mm.		0.00		
		nr	2.00		
J	PIPEWORK				
	PIPES SEWERS & FITTINGS - INSTALL				
J4	METHOD OF MEASUREMENT				
J421.21	TYPE B BY NUMBER: Bends nominal bore: 100 - 200 mm. Not in trenches	nr	8.00		
J421.21	Dends Horninal Bore. 100 - 200 Hill. Not in trenches	nr	0.00		
J423.41	Junctions and branches nominal bore: 300 - 400 mm.	nr	4.00		
	N. c. c.				
J424.21	Not in trenches Pipe pieces and bellmouths nominal bore: 100 - 200 mm.	nr	4.00		
		- "	4.00		
	Not in trenches				
J424.41	Pipe pieces and bellmouths nominal bore: 300 - 400 mm.	nr	16.00		
	Not in trenches				
J425.21	Couplings nominal bore: 100 - 200 mm. Not in trenches	nr	8.00		
J425.41	Couplings nominal bore: 300 - 400 mm. Not in trenches	nr	12.00		
J426.21	Gate valves nominal bore: 100 - 200 mm. Not in trenches	nr	8.00		
	Cate varves normal pore. 100 - 200 mm. Not in deficites				
J426.41	Gate valves nominal bore: 300 - 400 mm. Not in trenches	nr	4.00		
	Supply, install and commission ultrasonic flow meter to				
	measure and record flow in treated water open channel. The				
	instrument should be complete with measurement of instantaneous flow and totalised flow. The cost should include				
	for fixing brackets, battery backup, sensors / integrator, cables,				
	flow connector and calibration				
				1	

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
N	MISCELLANEOUS METALWORK				
	Stainless steel , plain (Include for bolts, welding, paining and fixing)				
	Penstock-Handstop Gates				
N99	150mm dia Cl Sluice Gate and Penstock for release of sludge	nr	4.00		
N910	Provide, install and fix 12mm thick double galvanized mild steel full width weir plate, size 1150mm x 575mm. Include for fish tail lugs and grouting of plate into rebates in walls and floor of clear water channel complete with 3mm thick stainless steel graduated scale	nr	2.00		
N911	Fabrication of 800×340×10mm GMS groove gate with handstop as per relevant Drawing.	nr	4.00		
N912	Manhole covers 600x600	nr	4.00		
U	BRICKWORK, BLOCK WORK & MASONRY				
U5	DENSE CONCRETE BLOCKWORK				
U511	One block construction Vertical walls Thickness not exc. 150 mm. Blockwork ancillaries	m2	10.00		
U591	Joint reinforcement using hoop iron in every other course	m	1,411.00		
	PAGE 4 TOTAL CARRIED TO BILL 2.2.2 COLLECTION SHEET				

	BILL TOTAL TAKEN TO TRE	ATMENT WORKS SI	JMMARY PA	AGE	1
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.2.2 COLLECTION PAGE				
	PAGE 2 TOTAL				
	PAGE 3 TOTAL				
	PAGE 4 TOTAL				
	BILL 2.2.2 TOTAL TAKEN TO BILL 2.2 SUMMAI	RY PAGE			-

	2.2.3 - SEDIMENTATION BASINS 4000M3/DAY							
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
	Leak proof testing							
A6	Allow for leak proof testing of the inlet channel to sedimentation, sedimentation tank and clear water channel	Item	L.S					
Е	CLASS E: EARTHWORKS							
E4	GENERAL EXCAVATION							
E410 E445.2	Excavate 200mm top soil and dispose	m2	364.90 893.99					
E445.2	Excavate in class III material max. depth 2 - 5 m for disposal	m3	093.99					
E435.1	Extra over excavation, depth 2 -5m for re-use	m3	383.14					
E6	FILLING AND COMPACTION							
E6112	Hardcore Using excavated Class I material.	m3	109.47					
F F3	IN-SITU CONCRETE Provision and placing of concrete. Rates to include supplying, mixing, placing, vibrating, curing etc. Provision for strength test in accordance with the specification Concrete Grade:15 Blinding							
F323	20 mm aggregate	m3	27.37					
F344	Concrete Grade: 25 Bases, ground slabs, Footing, Beams, Walls, Suspended Slabs, Roofing slabs, Ground slab for manholes - Thickness: 150 - 300 mm, Thickness: 150 - 300 mm Walls and Manhole walls - Thickness: 150 - 300 mm 20 mm aggregate	m3	268.72					
	CONCRETE ANCILLARIES							
G G2	FORMWORK: FAIR FINISH							
<u> </u>	Plane vertical							
G243	Fair finish to vertical sides of mass concrete footing width between 200mm and 400mm	m2	23.13					
G245.1	Ditto but to wall faces exc 1200mm	m2	1,151.80					
			,					
G245.2	Ditto but to walkway soffit and channels	m2	121.46					
G5	REINFORCEMENT							
	High yield steel bars to SSRN 126 or 127	1		<u> </u>				
G522	Diameter: 8 mm	kg	56.70					
G523	Diameter: 10 mm	kg	3,042.00					
G524	Diameter: 12 mm	kg	2,504.00					
G524	Diameter: 12 mm; additional	kg	16,104.00					
G525	Diameter: 16 mm	kg	5,914.00					
G6	JOINTS							
	Formed surface joint with filler							
G641	Width of depth: not exceeding 0.5 m.	m2	3.00					
	Plastic or rubber waterstop		3.00					
G651	Width: not exc 150mm	m	15.00					
G8	CONCRETE ACCESSORIES	1						
50	Finishing of top surfaces							
G812.1 G812.2	Steel trowel finishes to ground floor slab (5% slope) Ditto vertical walls	m2 m2	364.90 36.96					

	2.2.3 - SEDIMENTATION BASINS 4000M3/DAY								
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)				
G812.3	Ditto manholes base slabs	m2	16.00						
G812.4	Ditto vertical walls in manholes	m2	64.00						
G812.5	Ditto channels, walkways and launders	m2	86.00						
I	PIPE WORKS - SUPPLY AND INSTALL								
I1.2	200mm dia VJ flange adaptor	nr nr	2.00 8.00						
I1.3	200mm dia flange/spigot GS pipe with puddle flange, cut to fit as per drawing length, 2000mm	nr	4.00						
11.4	200mm spigot/spigot GS pipe, length 4350mm cut to fit	nr	2.00						
I1.5	200mm dia VJ coupling	nr	4.00						
	Barter board fittings								
11.6	200mm dia spigot/spigot GS steel pipe with 120° of mantle	nr	4.00						
I1.8	removed. Length 3475mm. VJ flange adaptors	nr	8.00						
I1.9	15mm Exp bolts	nr	8.00						
12.0	40x5mm flat iron	nr	4.00						
12.1	200mm dia flange/ spigot CS pipe, length 300mm	nr	4.00						
N	MISCELLANEOUS METALWORK								
N9	OTHER								
N910	Fabrication of 4000 × 250 × 6mm CMS weir plate as per relevant Drawing.	nr	12.00						
N91 1	Angle in a charting 00,000 FOR any law		04.00						
	Angle iron sheeting 80x80x5 250mm long	nr	24.00						
N912	Provide 10mm rag bolts	nr	224.00						
N913	Manhole chequered cover plates	nr	2.00						
N914	200 x 200 collecting trough with V-notches, including fittings	nr	12.00						
U	BRICKWORK, BLOC KWORK & MASONRY								
U5	DENSE CONCRETE BLOCKWORK One block construction								
U521	Vertical diffusion wall Thickness exc. 100 but not exc 250 mm.	m2	39.00						
	Blockwork ancillaries								
U591	Joint reinforcement using hoop iron in every other course	m	210.00						
W	WATERPROOFING								
W1	Damp proofing								
W168	10mm rendering in all visible block work PAGE 7 TOTAL CARRIED TO BILL COLLECTION SHEET	m2	157.00		-				

	2.2.3 - SEDIMEN	TATION BASINS 4000M	3/DAY		<u> </u>
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL COLLECTION PAGE				
	PAGE 6 TOTAL				-
	PAGE 7 TOTAL				-
	BILL 2.2.3 TOTAL TAKEN TO TREATMEN	T WORKS SUMMARY			-

	2.2.4 FILTERS (4000M3/I	DΔV /	I	1	I
	2.2.4 FILTERS (4000W3/I	JAT.)			
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
Е	CLASS E: EARTHWORKS				
E4	GENERAL EXCAVATION				
E410	Excavate 200mm top soil and dispose	m2	156.22		_
E445.2	Excavate in class III material max. depth 2 - 5 m for disposal	m3	382.73		-
E435.1	Extra over excavation, depth 2 -5m for re-use	m3	164.03		-
E443	Excavation in Rock material max depth 1.5m for re-use in Gabion Boxes and excess disposed off the site. For Weir, Chambers and Aprons	m³	80.00		-
E6	FILLING AND COMPACTION				
E6112	Hardcore Using excavated Class I material.	m3	18.00		-
E67	Backfill to reduced levels	m3	28.86		-
F	IN-SITU CONCRETE				
F3	Provision and placing of concrete. Rates to include supplying, mixing, placing, vibrating, curing etc. Provision for strength test in accordance with the specification				
	Concrete Grade:15 Thickness 50 - 100 mm Blinding				
3cF323	20 mm aggregate	m3	11.72		-
	Concrete Grade: 25 Thickness: 150 - 300 mm Bases, footing,				
3cF344	walls & ground slabs 20 mm aggregate	m3	169.00		_
		1110	100.00		
G	CONCRETE ANCILLARIES				
G2	FORMWORK: FAIR FINISH - INLET CHAMBER				
G225	Prepare sloping surface for floor gutters and basement footings Plane vertical	m2	282.00		-
G243	Fair finish to vertical sides of mass concrete footing width between 200mm and 400mm	m2	62.22		-
G245.1	Ditto but to wall faces exc 1200mm	m2	128.00		_
0240.1	Bitto But to Wall Idoes one 1200mm	1112	120.00		
G245.2	Ditto but to bottom of floor slab above wall faces exc 1200mm	m2	282.00		-
G245.3	Ditto but to bottom of roof slab faces exc 1200mm	m2	244.66		-
G245.4	Manhole	m2	56.00		_
		1112	00.00		
G5	REINFORCEMENT High vield steel bars to SSRN 126 or 127				
G522	Diameter: 8 mm	kg	22.00		-
G523	Diameter: 10 mm	kg	1,259.70		-
G524	Diameter: 12 mm	kg	800.00		-
G524	Diameter: 12 mm (additional)	kg	5,309.20		
G526	Diameter: 16 mm	kg	3,960.00		-
G526	Diameter: 16 mm (additional)	kg	2,813.80	1	-
G570	Fabric mesh A252	m2	160.00		-
G6	JOINTS				
0011	Formed surface joint with filler	_	2.22		
G641	Width of depth: not exceeding 0.5 m. Plastic or rubber waterstop	m2	3.00		-
G651	Width: not exc 150mm	m	17.00	1	_
- UUJ I	TANGER. HOLEKO TOOMIN	_ 111	17.00	1	

	2.2.4 FILTERS (4000M3/L	DAY.)			
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
G8	CONCRETE ACCESSORIES				
C010.1	Finishing of top surfaces	O	230.00		
G812.1	Min 10mm rendering on all visible external wall surfaces Ditto on internal wall surfaces, beams and columns	m2 m2	463.54		-
G812.2	Ditto beam soffits	m2	150.00		_
G812.3	Ditto basement slab and stairs	m2	120.00		-
I	PIPES AND FITTINGS - SUPPLY AND INSTALL				
I1	250mm dia GS flanged bend 90°	nr	2.00		-
l2	250mm dia GS flanged spigot with puddle flange length 400mm	nr	2.00		-
13	250mm butterfly valve lever operated	nr	4.00		-
14	250mm V.J flange adaptor	nr	2.00		_
17	230mm v.s mange adaptor	- 111	2.00		
15	250mm dia GS Pipe flange spigot (cut to fit)	nr	2.00		-
16	150mm dia GS Pipe flange spigot 500mm length	nr	2.00		-
17	150mm dia GS Pipe flange spigot (cut to fit)	nr	6.00		-
18	150 mm dia V.J GI adaptor (cut to fit)	nr	6.00		-
	. , , ,		0.00		
19	150mm butterfly valve lever operated	nr	6.00		-
I10	150/250 dia mm G.S Flanged taper	nr	6.00		-
l11	250 mm dia GS Equal tee	nr	2.00		-
l12	250mm dia GS flange spigot pipe 200mm length	nr	6.00		-
I13	250mm dia flange pipe length 300mm	nr	6.00		_
l14	Flange/spigot GS bend 45°	nr	6.00		_
117	riange/opiget de bend 40	- "	0.00		
I15	65mm dia spigot/spigot GS pipe male threaded 1180mm in length	nr	108.00		-
I16	65 mm dia GS equal tee female threaded	nr	54.00		-
l17	65 mm dia GS caps female threaded	nr	108.00		-
I18	65mm dia Spigot spigot GS pipe male threaded 150mm length	nr	54.00		-
l19	65 mm dia GS flange female threaded	nr	54.00		_
120	6*2400*450 mm galvanized ms plate		24.00		
	·	nr			-
I21	250mm*200mm GS reducing tee	nr	6.00		-
122	250mm dia flanged spigot GS pipe (cut to fit)	nr	6.00		-
123	300 dia GS VJ flange adaptor	nr	6.00		-
124	250 mm dia sluice valve	nr	6.00		-
125	300*250 mm GS flanged reducing tee	nr	6.00		-
126	300mm dia GS flanged spigot pipe (cut to fit)	nr	4.00		-
127	300 mm GS blind flange	nr	2.00		-
128	200 mm dia GS sluice valves	nr	6.00	+	_
129	200 mm dia GS VJ flange adaptor	nr	6.00		-
130	250/200 GS flanged tee	nr	6.00		-
-	PAGE 10 TOTAL CARRIED TO BILL COLLECTION SHE	ET			-

	2.2.4 FILTERS (4000M3/DAY.)							
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
131	200 mm dia flange spigot GS pipe (cut to fit)	nr	6.00		-			
132	250 mm dia VJ GS flange adaptor	nr	12.00		_			
133	250mm dia flange spigot GS pipe (cut to fit)	nr	4.00		_			
134	250mm dia GS blind flange	nr	2.00		_			
135	250mm dia GS elbow male and female threaded	nr	2.00		_			
136	25 mm dia spigot/spigot GS pipe one end male threaded length							
	1900 mm	nr	2.00		-			
137	250 mm dia flange /flange 90° GS bend	nr	4.00		-			
138	250 mm dia flange/spigot GS pipe (cut to fit) 250mm dia standard GS PVC adaptor type A2 length 600 mm	nr	6.00		-			
139		nr	2.00		-			
140	200mm dia blind flange	nr	6.00		-			
I41	80 mm dia GS elbow male and female threaded	nr	6.00		-			
142	80mm dia flange /spigot male threaded GS pipe (cut to fit)	nr	6.00		-			
143	80mm dia GS sluice valve	nr	6.00		-			
144	80mm dia GS flange /spigot pipe (cut to fit)	nr	6.00		-			
I45	250mm dia GS flange spigot pipe length 750mm	nr	6.00		-			
146	250mm dia VJ GS coupling	nr	6.00		-			
147	250mm dia spigot spigot GS pipe with puddle flange length 1200mm	nr	6.00		-			
148	80 mm dia GS flange spigot pipe with puddle flange length 2200mm	nr	2.00		-			
149	80mm GS sluice valve	nr	2.00					
150	80 mm dia flange spigot pipe (cut to fit)	nr nr	2.00		-			
		111	2.00		-			
N	MISCELLANEOUS METALWORK							
N9	OTHER							
N91 1	65 × 50mm cross bars for handrails length 800mm	m	384.00		-			
N912	32mm GS pipe welded for all handrails	m	210.00		-			
N913	10mm rag bolts	nr	600.00		-			
N914	5x50mm GMS welded	m	210.00		_			
N915	50x50x5mm angle GI length 1000mm	nr	280.00		-			
N916	6mm GMS deck plate or bridge each 800x200 subject to local conditions	nr	12.00		-			
N917	200mm U Beams GMS 1400mm for stairs (length subject to local conditions.)	nr	4.00		-			
N918	200mm channel GI for bridge, length subject to local conditions	nr	24.00		-			
V	PAINTING			†				
V170	1 coat of lead oxide primer and 2 coats of oil paint to all steelworks and rails	m	594.00		-			
V553	3 coats of emulsion paint to all visible surfaces of walls, beams,	_						
	columns and slabs	m2	320.00		-			
w	WATERPROOFING							
W1	Damp proofing							
W111	2 coats of approved bitumen on upper surface inclined at an							
	angle not exc. 30 degrees to the horizontal	m2	120.00		-			
W168.1	10mm rendering in all visible external block work	m2	320.00		_			
W1 68.2	Ditto in internal wall surfaces, beams and columns	m2	320.00		_			
W1 68.3	Ditto in beam soffits	m2	150.00		-			
	Ditto in basement slabs and stairs	m2	120.00		-			
W1 68 4		1114	120.00	+	-			
W1 68.4 W5	Sprayed or brushed water proofing using (Stated)							
W1 68.4 W5 W50	Sprayed or brushed water proofing using (Stated) Pigmented 'TYROLEAN' plaster finish to all rendered external surface	m2	320.00		_			

	2.2.4 FILTERS (4000M3/I	DAY.)			
		,			
NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
Х	MISCELLANEOUS WORK				
X5	Underdrainage to structures				
X531	Perforated uPVC Diameter: 100 mm.	m	138.00		-
X9	OTHER				
	Provision of Filter Media for 4no Filters				
X91	Provide selected sand for filter media.	m3	36.00		-
	The grading shall be as per Engineer's Specification.				
X92	Provide selected gravel for filter media.	m3	28.00		-
	The grading shall be as per Engineer's Specification.				
X93	Provide for a sludge lagoon. Include for excavation, compacting and all necessary pipework and fittings	m3	100.00		
X94	Extra over in excavation for the lagoon	m3	15.00		-
	Air Compressor				
VOE					
X95	Supply and install an Air Compressor 1m3/s at 14 Bar. Contractor to submit to engineer specifications and offer for approval. Proof that the compressor is from a company with a local franchise within Kenya, currently stocking the product and its spares should be provided.	nr	2.00		-
V	PAINTING OF PIPEWORK				
43V389	Allow for painting all exposed pipework in the Pump House and Filter Gallery with 3 coats of Oil Gloss Paint	m2	200.00		-
Х	OPERATION PLATFORMS IN FILTER GALLERY				
^	OPERATION PLATFORMS IN FILTER GALLERY				
43X599.1	Allow for Fabrication and Erection of Operation Platforms in Filter Gallery, including 100x100mm SHS Support Columns and 4mm thick Chequred Plate Decking, all as per detailed Drawings issued by the Supervising Engineer	nr	8.00		
43X599.2	Supply and install 2.6m high GMS Ladder, 400mm wide, with stringers and rungs made from 40mm GMS tubes, for access to the Filter Gallery Operation Platforms	nr	4.00		-
	PAGE 12 TOTAL CARRIED TO BILL COLLECTION SHEET		,		-

	2.2.4 FILTI	ERS (4000M3/DAY.)			
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
	BILL 2.2.4 COLLECTION PAGE				
	PAGE 9 TOTAL				-
	PAGE 10 TOTAL				-
	PAGE 11 TOTAL				-
	PAGE 12 TOTAL				-
				1	
	 2.2.4 TOTAL TAKEN TO TREATMENT WORKS \$				-

	BILL 2.2.5 CLEAR WATER TA	NK 5001	<u></u>		
			O=1/	D. 1 == (1/0)	44401NIT ((60)
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
E	CLASS E: EARTHWORKS				
E005.4		2	007.00		
E325.1 E335.2	In class I material max. depth 2-5m for re-use In class II material max. depth 2-5m for re-use	m³ m³	907.20 388.80		-
E333.2	III class ii materiai max. deptir 2-5m for re-use	""	300.00		-
E443	Excavation in Rock material max depth 1.5m for re-use in Gabion Boxes and excess disposed off the site. For Weir, Chambers and Aprons	m³	80.00		-
ГС	FILLING AND COMPACTION				
E6 E6112	FILLING AND COMPACTION Hardcore using excavation Class I material	m³	97.20		_
E0112	Traductive using excavation class (material	111	97.20		-
F3	Provision and placing of concrete. Rates to include supplying, mixing, placing, vibrating, curing etc. Provision for strength test in accordance with the specification				
5000	Provide Concrete Grade:15 Blinding	2	04.00		
F323	20 mm aggregate	m³	24.00		-
	Provide Concrete Grade: 20 for walls, columns, Footing ground and Roofing slabs				
	Provide Concrete Grade: 25 for walls, columns, Footing ground and Roofing slabs				
F333	20 mm aggregate	m³	158.32		-
G	CONCRETE ANCILLARIES				
	Formwork;Rough Finish;Plane Vertical.				
G241	External sides of base slab;width <0.2	m²	24.65		-
G242	Formwork; Fair Finish; Plane vertical walls of tank, sides of beams and columns	m²	363.24		_
OZTZ	wais of tank, sides of beams and columns		000.Z-i		
	Formwork; Fair Finish; Plane horizontal				
G243	soffits of beams and top roof slab	m²	225.00		-
G5	REINFORCEMENT				
	REIN ORGENERY				
	High yield steel bars to SSRN 126 or 127	Tons	17.48		-
G6	JOINTS				
- 00	Formed surface joint with bondex filler at tank bottom				
G641	Width of depth: not exceeding 0.5m	m²	2.65		-
G8	CONCRETE ACCESSORIES Finishing of top surface				
G812	Steel towel finish	m²	252.81		-
I	PIPEWORK - PIPES & PIPE FITTINGS - SUPPLY				
l612.4h	Drain uPVC Pipes Class C, 160mm dia	m	600.00		_
1012.411	Class C, Toomin dia	- 111	000.00		_
2/Bill-2.24	250mm dia GS flanged spigot with puddle flange length 400mm	nr	2.00		-
		-		+	
		 			

	BILL 2.2.5 CLEAR WATER TA	NK 500	M3		
	SIEL E.Z.O GELANWATEN TA	1111	<u> </u>		
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
13	FITTINGS TO WELDED STEEL PIPES				
	Welded steel pipes to SSRN 216 externally & internally fusion bonded epoxy to SSRN 241 PN 16 Bends				
1314.4	50mm diameter double flanged long radius 90 degrees bends.	nr	16.00		-
l314.4a	80mm diameter double flanged long radius 90 degrees bends.	nr	21.00		-
l314.4b	100mm diameter double flanged long radius 90 degrees bends.	nr	1.00		-
I314.4c	300mm diameter double flanged long radius 90 degrees bends.	nr	1.00		-
l314.4d	200mm diameter double flanged long radius 90 degrees bends.	nr	4.00		-
1050.4	Tapers		0.00		
1352.4	100 x 80mm diemeter. Double flanged concentric taper Adaptors and couplings	nr	6.00		-
1385.4	50mm diameter Flanged adaptor and couplings	nr	43.00		-
I385.4a	80mm diameter Flanged adaptor and couplings Pipe pieces and bellmouths	nr	21.00		-
I371.4	50mm plain ended pipe c/w central puddle flange length 1m	nr	12.00		-
l371.4a	80mm plain ended pipe c/w central puddle flange length 1m	nr	3.00		-
1375.4	50mm single flanged spigot pipe length 2.5m(cut to suit)	nr	3.00		-
1376.4	80mm single flanged spigot pipe length 2.5m(cut to suit)	nr	12.00		-
1376.4a	50mm double flanged spigot pipe length 1.5m	nr	8.00		-
1376.4b	80mm double flanged spigot pipe length 1.5m	nr	5.00		-
l376.4b	80mm dia Flanged bellmouth	nr	5.00		-
1376.4b	Double flanged pipe with puddle flange,DN300×750mm	nr	1.00		-
l376.4b	Single flanged pipe with puddle flange,DN300×1000mm	nr	1.00		-
I376.4b	Single flanged pipe with puddle flange,DN300×500mm	nr	1.00		-
I376.4b	Single flanged pipe with puddle flange,DN1000×400mm	nr	1.00		-
l376.4b	300mm dia Flanged bellmouth	nr	1.00		-
l376.4b	Single flanged pipe with puddle flange, DN400×1000mm	nr	1.00		-
I376.4b I9	Single flanged pipe with puddle flange,DN100×1000mm VALVES, PENSTOCK, HYDRANTS, METERS	nr	1.00		-
J	Gate valves PIPEWORK - PIPES & FITTINGS - INSTALL				
J4	METHOD OF MEASUREMENT TYPE B BY NUMBER Pipe and fittings install				
	PAGE 15 TOTAL CARRIED TO BILL COLLECTION SHEET				
	AGE 13 TOTAL GARRIED TO BILL GOLLECTION SHEET				•

BILL 2.2.5 CLEAR WATER TANK 500M3							
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)		
J416.13	uPVC pipes n.b n.e 100mm intrenches depth 1-1.5m	m	230.00		-		
J421.41	Bends flanged Nb:not exc. 100mm, not in trenches	nr	1.00		-		
J421.41	Nb: not exc. 200mm, not in trenches	nr	4.00		-		
J421.41	Nb: not exc. 300mm, not in trenches	nr	1.00		-		
J243.11	Tapers flanged Nb:not exc. 100mm, not in trenches	nr	6.00		-		
J242.11	Pipe pieces and bellmouths flanged Nb:not exc. 100mm, not in trenches	nr	6.00		-		
J242.11	Nb: not exc. 200mm, not in trenches	nr	2.00		-		
J242.11	Nb: not exc. 300mm, not in trenches	nr	4.00		-		
J242.11	Nb: not exc. 1000mm, not in trenches	nr	1.00		-		
J242.11	1000mm dia blind flange	nr	1.00		-		
J425.11	Adaptors, collars couplings & blank flanges Nb:not exc. 100mm, not in trenches Gate & butterly valves flanged	nr	4.00		-		
J426.11	Nb: not exc.100mm, not in trenches Meters	nr	1.00		-		
J428.11	Nb: not exc.100mm, not in trenches Ball valves	nr	5.00		-		
J429.11 K	Nb: not exc.100mm, not in trenches PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES	nr	5.00		-		
K131.23	Gate vlave chamber, size 2000 x 2000mm internal dimensions, depth as shown.	nr	3.00		-		
K134.23	Bulk vlave chamber,size 2000 x 2000mm internal dimensions, depth as shown.	nr	1.00		-		
K136.23	Overflow/Washout vlave chamber,size 2000 x 2000mm internal dimensions, depth n.e.3.0m PIPEWORK-SUPPROTS AND PROTECTION ANCILLARIES	nr	1.00		-		
L	TO LAYING AND EXCAVATION Extras tp excavation and backfilling in pipe trenches,	_					
L112	excavation of Class II material.	m³	23.00		-		
L713.1	Concrete Class 15/20 in Stools and Trust Blocks Nominal bore n.e 200mm; volume 0.2-0.5m3	nr	1.00		-		
N	MISCELLANEOUS METALWORK						
	Rate to include supply and fixing and inclusive of foundation where applicable						
N231.1	Galvanised mild steel internal ladders with stringers returnes to form handrails	m	3.00		-		
N231.2	Galvanised mild steel external ladders with stringers returnes to form handrails	m	2.00		-		
N9.1 N9.2	Lockable mild steel sheet metal covers for access manholes as per details on Drg. Step irons.	nr nr	3.00		-		
U	BRICKWORK, BLOCKWORK & MASONRY DENSE CONCRETE BLOCKWORK	111	00.00				
U512.1	150 x 225mm composite construction in vertical curved walls	m²	10.00		-		
U512.2	150 x 300mm composite construction in vertical curved walls	m²	15.00		-		

	BILL 2.2.5 CLEAR WATER TA	ANK 500	<u>M3</u>		T
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
W	WATERPROOFING				
W1	WATERPROOFING DAMP PROOFING				
W154	Using rendering in ordinary cement mortar of curved surfaces less than 10m radius	m²	80.38		-
Х	MISCELLANEOUS WORK				
X9.1	Provide and fix vent pipes	nr	2.00		-
7,5.1	1 Tovide and the vent pipes	- "	2.00		_
		-			
				+	
		+ -			
		1			
	PAGE 17 TOTAL CARRIED TO BILL COLLECTION SHEET	-		-	_

	BILL 2.2.5 CLEAF	R WATER TANK 500	И3		
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.2.5 COLLECTIONM PAGE				
	PAGE 14 TOTAL				-
	PAGE 15 TOTAL				-
	PAGE 16 TOTAL PAGE 17 TOTAL				-
	TAGE IT TOTAL				
	BILL TOTAL TAKEN TO TREATMENT WORKS	SUMMARY PAGE			-

	BILL 2.2.6 CHEMICAL H	OUSE			
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
E	CLASS E: EARTHWORKS				
E3	Excavation for Foundation:-				
E311	Excavation of surfaces to reduce the level depth not exc. 0.25 m	m ³	152.00		-
E322	Excavate for Foundations and bases for depth 0.25 - 0.5m	m ³	1.30		-
E532	Disposal of top soil, rock or artificial hard material	m ³	11.00		-
F722	1000x1000x300mm Column Bases and 600x200mm footings	m ³	7.00		-
PAGE	19 TOTAL CARRIED TO BILL 2.2.6 COLLECTION SHEET				-

BILL 2.2.6 CHEMICAL HOUSE									
ITEM	SILE 2.2.0 OTTERMORE IN	<u> </u>	OTV	DATE (KOL-)	AMOUNT (KOL-				
NO.	DESCRIPTION	UNIT	QTY	RATE (KSIIS)	AMOUNT (KShs				
G2	Formwork - Fair Finish:-								
G243.1	Vertical sides of ring beam	m ²	80.00						
G243.2	Vertical Sides of the columns	m ²	29.60						
G243.3	External and internal sides of reinforced concrete walls	m ²	131.00						
G243.4	Soffit and sides of the staircase	m ²	3.00						
G243.5	Soffit of the mixing tank floor slab	m ²	27.00						
G243.6	Soffit of internal beams	m ²	3.00						
0245.0		111	3.00						
	Reinforcement								
G54	Provide and Fix High Tensile Steel Reinforcement to SRN 127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:-								
G542	8 mm diameter	kg	397.00						
G543	10 mm diameter	kg	502.00						
G544	12 mm diameter	kg	1,341.00						
G545	16 mm diameter	kg	108.00						
G6	JOINTS AND WATER STOPS								
	(Rates to include for all rebates, shuttering, PVC waterstop, resin bonded cork joint sealers and bituminous painting)								
G651	Construction joint between wall and wall base together with 150 mm wide eyeleted water stop with central bulb	m	25.80						
PA									

	BILL 2.2.6 CHEMICAL H	OUSE	USE				
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)		
	<u>Joints</u>						
G642	Provide approved joint filler on formed surfaces	m	21.70				
	Trovide approved joint liner on formed surfaces	,,,	21.70				
G8	Concrete Accessories	2					
G812	Trowel finish of top surfaces	m ²	186.00				
G823	Trowel finish of formed surfaces	m ²	158.00				
Н	CLASS H: PRECAST CONCRETE						
H5	Precast Concrete Slabs(Provisional)						
H521	Paving slabs, cover slabs over scour, overflow channel	m ²	132.16				
	Ventilation						
H131	Precast Concrete Ventilation Blocks	m ²	9.00				
U	CLASS U: BRICKWORK, BLOCKWORK AND MASONRY						
U1	Walling.						
U12	Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):-						
U121	150 mm Walling	m ²	62.40				
U122	200 mm Walling	m ²	93.53				
W1	Damp-Proof Course:						
U122	200 mm Walling	m ²	166.92				
W1	Damp-Proof Course:						
** 1	Bituminous Felt Damp-Proof Course as Described:-						
W116.1	150mm Wide under walls	m	12.00				
W116.2	200mm Wide under walls	m	66.30				
G811	Finishes. 15mm Cement and sand (1:4) render to plinth walls, finished with a wood float	m ²	500.00				
V83	Prepare and apply two coats of bituminous paint on rendered plinth walls	m ²	500.00				
0	CLASS O: TIMBER						
00/2/	Roof		100.00				
O213.1 O213.2	75 x 150 mm Rafter: in trusses 2/ 25x 150 mm: tie beam	m m	402.80 339.20				
0213.3	100 x 50 mm: Struts and ties	m	725.00				
0213.4	2/25x1 50 mm: Struts and ties	m	450.00				
O213.5 O213.6	150 x 50mm ridge piece 100 x 50 mm Wall plate: fixed to concrete with approved bolts	m m	26.00 74.00				
O213.7	at 1000 mm centres 2/ 75 x 50mm purlins	m	260.00				
O213.8	300 x 25 mm Fascia Board	m	74.00				
0117	Steel angle cleats 50 x 25 x 100mm - 3mm thick	nr	210.00				
OE4	16mm diameter high density rag bolt 150mm long built into		620.00				
O54	beam: including nut and washer GE 21 TOTAL CARRIED TO BILL 2.2.6 COLLECTION SHEET		630.00	1			

	BILL 2.2.6 CHEMICAL H	OUSE			I
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
N21	Cladding				
N21.1	24 gauge IT5 sheeting	m ²	310.00		
N21.2			17.00		
INZ 1.Z	Ridge cap	m	17.00		
Z321.1	Windows 1900 x 1000 mm steel casement windows with grills	nr	6.00		
	<u>Doors</u>				
Z331.1	50 mm single leaf panel composite door unit (overall) size 900 x 2400 mm high: comprising 50 x 150 mm stiles, top and middle rails, 50 x 200 mm bottom rail; 1 no. door leaf size 900 x 2050mm: panels infilled with 50 mm hardwood boarding rebated and splayed at joint to frame: 900 x 300mm high fan light infilled with glass (m/s)	nr	2.00		
Z331.2	50 mm double leaf panel composite door unit (overall) size 1800 x 2400 mm high: with 2 no. equal leaves 750 mm wide and one side light 300 mm wide; comprising 50 x 150 mm stiles, top, and middle rails, 50 x 200 mm bottom rail; 2 no. door leafs size 1000 x 2050mm and 600 x 2050 mm high: panels infilled with 50 mm hardwood boarding rebated and splayed at joint to frame: 1600 x 300mm high fan light infilled with glass (m/s)	nr	1.00		
	Supply and fix the following ironmongery as per "Assa Abloy"				
	catalogue to Engineers approval ; to timber ; with matching screws				
Z341	100 mm Brass butt hinges Pairs		4.00		
Z332	Rubber door stops		4.00		
Z343	5 lever system Multi lock complete with handles		3.00		
	Ceiling				
	12mm thick approved chipboard to BS 2604, Part 2, density 480-640kgs, per square meter 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				
Z114.1	Horizontal ceiling fixed to underside of trusses	m ²	159.00		
Z114.1	12mm cornice 50 mm high, plugged	m	51.20		
V	CLASSV: PAINTING				
V53	Prepare and Apply Three Coats Exterior Quality Plastic Emulsion Paint:-(Provisional)				
V533	Fair-faced concrete surfaces	m ²	586.00		
V733	Water Based Epoxy Floor and Wall Coating as 'MASTERTOP 1110T' applied strictly in Accordance with the Manufacturer's Printed Instruction :-				
V733.1	Coating laid to floors	m ²	358.00		
V733.2	Coating laid to mixing tank walls, partitions and as skirting and upstands	m ²	131.00		
	GE 22 TOTAL CARRIED TO BILL 2.2.6 COLLECTION SHEET				

	BILL 2.2.6 CHEMICAL HO	DUSE			
17514			OT)/	DATE (KOL.)	AMOUNT (KOL.)
NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
N	CLASS N: MISCELLANEOUS METAL WORK				
N1	All steelwork to be completely cleaned by acid dipping prior to galvanising				
N120	Galvanized steel Chequered 6mm thick with steel angles all round for the landing and the covers to the mixing tanks	m ²	25.00		-
N130	200 X 200 X 200 x 6mm steel stirrups used to access the mixing tanks	nr	54.00		-
N140	50 x 50 x 4mm thick galvanised mild steel tubular balustrades guardrails all framed and welded together, including all necessary labours and fittings on tubings:	m	50.00		-
	Chemical Stirrers				
Z520	Supply, install, test and commission mechanical stirrers in chemical mixing tnks. The shaft and impellers to be of non-corrossive material. Include all materials for fittixing on tanks e.g. holding down bolts etc	nr	4.00		-
Z512.1	100 mm dia vent pipes 200 mm long	nr	1.00		-
Z512.2	20 mm DN hose connection	nr	1.00		-
Z512.3	25 mm DN bass gate valve	nr	6.00		-
	Chemical Dosing Pipework and Equipment				
Z512.4	100 mm DN brass gate valves to scour	nr	4.00		_
	The state of the s				
Z512.5	110 mm DN uPVC drain pipe to chemical scour and overflow.	m	30.00		-
Z512.6	110 mm DN uPVC equal tee	nr	8.00		-
Z512.7	110 mm DN uPVC 90° bend	nr	8.00		-
Z511.1	25 mm DN uPVC pipes for clear water filling, flushing and wash hand basin	m	60.00		-
7544.0			00.00		
Z511.2	25 mm DN bore rubber tubes for chemical solution dosing 90 mm DN PVC pipe 6 m long to house chemical dosing pipes	m	30.00		-
Z512.8	rate to include 2 No. 90° bend	nr	4.00		-
Z512.9	50 mm DN PVC chemical solution outlet pipework including 2 No. short pipes (approximately 200 mm long) 2 no. valve sockets 1 No. 50 x 32 mm DN reducing socket, 1 No. 40 mm DN and 1 No. brass gate valve	nr	4.00		-
Z512.10	25 mm DN nominal bore rubber hose pipe approximately 800 mm long to solution tanks	nr	4.00		-
Z512.11	Pressurised solution doser rate of dosing not less than 181 l/h	nr	4.00		-
Z512.12	White vitreous china wash hand basin size approximtely 400 x 300 mm complete with concealed wall bracket, plug, 40 mm DN chromium plated wastewater pipe, tap, bottle trap and connection to drain channel	nr	1.00		-
PA	GE 23 TOTAL CARRIED TO BILL 2.2.6 COLLECTION SHEET				-

	BILL 2.2.6 CHEMICAL	HOUSE			
	SIZE ZIZIO OTIZIMIO) IZ				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.2.6 COLLECTION PAGE CARRIED TO BILL 2.2 GRAND SUMMARY PAGE				
	GRAND SUNIMART FAGE				
	2105 (0 707)				
	PAGE 19 TOTAL				-
	PAGE 20 TOTAL				-
	PAGE 21 TOTAL				-
	PAGE 22 TOTAL				
					-
	PAGE 23 TOTAL				-
DU L C C		MARY			
BILL 2.2	2.6 COLLECTION PAGE CARRIED TO BILL 2.2 GRAND SUM	MARY			-

	BILL 2.2.7 CHLORINATION	HOUSE			I
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	CLASS E: EARTH WORKS				
G	CLASS G: CONCRETE ANCILLARIES				
G2	FORMWORK: FAIR FINISH				
	Plane Vertical				
G242	Fair finish to vertical sides of ring beam, columns, strip footing and roof slab	m ²	50.00		-
	Plane Horizontal				
G243	Fair finish, to soffits of roof slab, suspended floor slabs and stair cases	m ²	20.00		-
G5	REINFORCEMENT				
	High yield steel bars to SSRN 126 or 127				
G532	Diameter: 8mm	kg	75.00		-
G533	Diameter: 10mm	kg	460.00		-
G535 G56	Diameter: 16mm Wire weld fabric Bs REF. A142	kg m ²	143.00 4.52		-
G8	CONCRETE ACCESSORIES				
	Finishing of top surfaces				
G813	40mm screed,cement: sand 1:3 1% fall smooth trowel finish	m ²	32.05		_
G815	Ditto stair treads	m ²	1.20		_
G815	Ditto stair risers	m ²	1.00		-
U	CLASS U: BRICK WORK, BLOCKWORK & MASONRY				
	LIGHTWEIGHT CONCRETE BLOCKWORK				
	One block construction				
U121	Vertical walls: Thickness 150-250mm for superstructure	m ²	13.00		-
U18	Blockwork ancillaries				
	AGE 25 TOTAL CARRIED TO BILL 2.2.7 COLLECTION SHEET	ļ			

	BILL 2.2.7 CHLORINATION	HOUSE				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)	
	CLASS W: WATERPROOFING					
W1	Damp proofing Rendering with proprietary mix mortar					
	Tendening with proprietary mix mortal					
W153	Internal 20mm mortar rendering, cement/sand 1:4 painted "soft white" to Ks 10B 15 or similar	m ²	49.00		-	
	Sprayed or brushed water proofing using (Stated)					
W50	External spray of tyyrolean coloured soft white to Ks 10 B 15 or	m ²	40.00		-	
	CLASS X: MISCELLANEOUS WORK					
	Drainage to structures above ground					
X331	Gutters including all fittings	m	27.00		-	
X3332	Down pipes including all fittings	m	12.00		-	
X2	Gates					
	Wood,flush,external					
X211	Single leaf,standard. 900mm wide	nr	2.00		-	
Z341	100 mm Brass butt hinges Pairs	nr	1.00		-	
Z332	Rubber door stops	nr	1.00		-	
Z343	5 lever system Multi lock complete with handles	nr	1.00		-	
	Other	2				
H600 X91.1	Precast concrete grill work of approved type Emergency shower	m ²	1.00		-	
Λ91.1	Emergency snower	nr	1.00		-	
	SUBSTRUCTURE WALLING					
U821	Supply, lay and join with sand cement motar 230mm thick stone masonry wall in strip foundation	m ²	11.00		-	
	Doser Units					
X91.2	Pressurised solution feeder, constant level tank with inlet connector, repentor,outer funnel and 50mm tubing for outlet. Includes valves and chemical reinstant tubing. Flow upto 15ml/s.	nr	2.00		-	
	CLASS N: MISCELENEOUS METALWORK					
N140	50 x 50 x 4mm thick galvanised mild steel tubular balustrades guardrails all framed and welded together, including all necessary labours and fittings on tubings:	m	20.00		-	
	CLASS V: PAINTING					
4.7V7	EPOXY PAINT TO TANKS,FLOORS & WALLS					
4.7V733	Provide and apply 3 coats of approved Epoxy Paint on 1 coat	m ²	5.00		-	
	epoxy primer to internal surfaces of Chemical Mixing tanks					
	('Master seal 180' as made by BASF or approved equivalent)					
4.7V733	Ditto-but to floors and walls of chemical Storage and Mixing areas	m ²	30.00		-	
	CHEMICAL STIRRERS					
X91.3	Supply,install,test and commission Mechanical Stirrers in Chemical Mixing Tanks. The shaft and impellers to be of non-corrosive material.Include all materials for fixing on tanks e.g holding down	nr	2.00		-	

	BILL 2.2.7 CHLORINATION	HOUSE			
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Chemical Dosing Pipework and Equipment				
Z512.4	100 mm DN brass gate valves to scour	nr	2.00		-
Z512.5	110 mm DN uPVC drain pipe to chemical scour and overflow to soak away pit	m	30.00		-
Z512.6	110 mm DN uPVC equal tee	nr	4.00		-
Z512.7	110 mm DN uPVC 90° bend	nr	4.00		-
Z511.1	25 mm DN uPVC pipes for clear water filling, flushing and wash hand basin	m	60.00		-
Z511.2	DN25 mm HDPE pipe for chemical solution dosing	m	20.00		-
Z511.3	DN 110mm UPVC pipe sleeve	М	20.00		-
	CLASS Z: SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS				
Z3	WINDOWS & CEILINGS				
	Windows				
	Supply and fix the following uPVC Windows in small section panes with opening accessories, complete with				
	glazing:-				
Z321	Window size 1200 * 1000 mm	nr	1.00		-
G812.6	Allow for the placement of precast reinforced concrete window sills as directed by the Engineer.	nr	10.00		-
P.	AGE 27 TOTAL CARRIED TO BILL 2.2.7 COLLECTION SHEET				-

ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.2.7 COLLECTION PAGE				
	PAGE 25 TOTAL				-
	PAGE 26 TOTAL				-
	PAGE 27 TOTAL				-
		1			
		1			
		1			
-					
	BILL 2.2.7 TOTAL TAKEN TO TREATMENT WORKS GRAM	ID SUM	MARY BACE		-

	BILL 2.2.8 PUMP HO	USE			
ITEM	DESCRIPTION				
NO.		UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	DEMOLITION AND SITE CLEARANCE				
	Clear site of small bushes and grub roots of small trees and	_			
D11	cart	m ²	150.00		-
	EARTHWORKS				
	GENERAL EXCAVATION				
E311	Excavate 200mm top soil and dispose	m ²	110.00		-
		2			
E323	Excavate in class 111 material max. depth 1 m for disposal	m ³	90.00		-
E323	Extra over excavation, depth 1 - 3.5 m for re-use	m ³	275.00		_
L020	Exact ever executation, depart 1 - 0.0 in for 10 dec	- '''	270.00		
	Excavation Ancillaries				
E51	Trimming of excavated surfaces to receive blinding concrete	m ²	90.00		-
	Anti-Termite Treatment				
W500	Allow for termite and insect treatment of foundation	sum	1.00		-
	IN-SITU CONCRETE Design mix for ordinary structural concrete for Class B				
	exposure using Ordinary Portland cement				
	Provide Concrete Grade 15				
F122.1	75mm thick blinding under base slab and column bases	m ³	6.00		_
		- 111	0.00		
	PLACE REINFORCED CONCRETE C25				
	Bases, footing, ground slabs				
F122.2	Thickness:150-300 mm	m ³	22.00		_
E400.0	Walls	2			
F122.3	Thickness:250 mm	m ³	26.00		-
	Columns				
F122.4	Thickness: 300 x 300 mm	m ³	2.00		-
	Slab and Staircase				
F122.5	Thickness:250 mm	m ³	8.00		_
			0.00		
	Beams_				
F122.6	X Sectional area 0.03-0.1 m2	m ³	5.00		-
	Pump Plinth	1			
F122.7	Thinkness:150-300 mm	m ³	3.00		-
	CONCRETE ANCILLARIES	1			
	Provide and fix shuttering including propping, strutting and striking all as specified, icludin for boxing out openings				
	Samming an as specified, loading for soving out openings				
	(i) Vertical Formwork - Fair Finish				
G242	Sides of 300 mm base slab and columns bases	m ²	12.00		-
	(iii) Vertical Formwork - Class Fair Finish	1			
G242	Internal and external of walls	m ²	239.00		-
	mornal and external of walls	1"	200.00		
G242	Ring beams	m ²	50.00		-
P	AGE 29 TOTAL CARRIED TO BILL 2.2.8 COLLECTION SHEET	Т	-		-

	BILL 2.2.8 PUMP HOU	SE		I	
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
140.	Plane Horizontal formwork				
G243	Fair finish, to soffits of beams and suspended floor slabs	m ²	40.00		-
	REINFORCEMENT				
	High yield steel bars to SSRN 126 or 127				
G543	Diameter: 8 mm	kg	196.00		-
G544	Diameter: 10 mm	kg	594.00		-
G545	Diameter: 12 mm	kg	2,990.00		-
G546	Diameter: 16 mm	kg	1,452.00		-
G56	BRC messh A142	m ²	55.40		-
	Construction Joints				
	Provide and install the following waterstops in construction joints including all surface treatment,rebates and formwork				
G652	200 mm wide expansive super-cast water foil PVC or similar approved waterstop in construction joints in walls (Provisional)	m	69.00		-
	ROOFING				
	Roof including trussed rafters, fittings and fastenings				
O213.1	Roofing timber cypress 100 x 50 mm to purlins and struts	m	130.00		-
O213.2	Ditto cypress 150 x 75 mm	m	72.00		-
O213.3	Ditto cypress 100 x 75 to tie beam and king post	m	72.00		-
O213.4	300 x 25 mm Fascia Board	m	50.00		-
O213.5	100 x 100 mm wall plate	m	25.00		-
N21.1	24 gauge IT5 sheeting	m ²	156.00		-
N21.2	Ridge cap	m	13.00		-
	BRICKWORK, BLOCKWORK & MASONRY Superstructure Walling				
U121	Supply, lay and join with sand cement mortar 200 mm thick stone masonry wall	m ²	99.00		-
	Cladding				
U781	Blockwork ancillaries Joint reinforcement using 50 x 6mm hoop iron ties 300mm long in every other course	m	410.00		-
	Damp proof membrane				
U782	Single layer of 500 gauge polythene sheeting laid on blinded hardcore with 150mm side laps to receive concrete	m ²	51.00		-
	Anti-Termite treatment				
W500	Treat surface f hardcore with approved anti termite solution applied strictly in accordance with the manufacturers instructions GE 30 TOTAL CARRIED TO BILL 2.2.8 COLLECTION SHEET	m ²	51.00		-

BILL 2.2.8 PUMP HOUSE							
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)		
	DAINTING						
V V V V V V V V V V V V V V V V V V V	PAINTING 2 coats of emulsion paint on doors and windows	m ²	19.00		-		
V521	2 coats of emulsion paint on doors and windows	III	19.00		-		
W	WATER PROOFING				-		
W151	Rendering with proprietary mix mortar				-		
	Internal 20 mm mortar rendering, cement/sand 1:4 painted soft				-		
W151	white to ks 10 B 15 or similar	m ²	102.00		-		
	SPRAYED OR BRUSHED WATER PROOFING USING (stated)				-		
W500	External spray of tyrolean coloured soft white to ks 10 B 15 or similar	m ²	102.00		-		
Х	MISCELLANEOUS WORK						
V044	Drainage to structures above ground		20.00				
X311	Gutters inclusive of all fittings	m	28.00		-		
X313	Downpipes inclusive of all fittings	m	14.00				
1 67321 1	Windows HD 2FS window as specified in the drawing	nr	1.00		_		
4.02321.1	TID 2F3 WINDOW as specified in the drawing	111	1.00		-		
Z321.2	HD 4FS windows as specified in the drawing	nr	2.00		-		
	<u>Doors</u>						
Z331.1	Metal external Single leaf, standard, 800 mm wide		1.00				
2331.1	Single lear, Standard, 600 mm wide	nr	1.00		-		
Z331.2	Flush door 1500 mm wide	nr	2.00		-		
	Other						
H131	100mm dia vent pipes 200mm long	nr	1.00		-		
H131.2	Precast concrete grill work of approved type	m ²	5.00		-		
H131	precast concrete vent blocks	m ²	2.00		-		
E635.1	Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar	m ²	40.00		-		
	MISCELENEOUS METALWORK						
N140	50 x 50 x 4mm thick galvanised mild steel tubular balustrades guardrails all framed and welded together, including all necessary labours and fittings on tubings:	m	15.00		-		
	Mild steel angle 40 x 40 x 5mm thick fixed to floor at 600mm centres with and including mild steel lugs	m	10.00		-		
	Mild steel grating 250mm wide made out of 40 x 40 x 3mm thick angle framing infilled with 40 x 6mm thick flat bar spaced at 35mm centres with both ends welded to angle	m	5.00		-		
	PIPEWORK						
	Supply and fix galvanized steel pipes and fittings and others						
	Double flanged pipe with 25 mm male threaded tapping for						
I412.1	pressure gauge 80 mm diameter approx. 400 mm long	nr	2.00		-		
	5mm dia. pressure gauge - (pressure class upto 10 bars)	nr	2.00		-		
I412.3	hunter or approved equivalent						

	BILL 2.2.8 PUMP	HOUSE			
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
NO.		ONIT			
J311.3	150 mm dia flanged/ flanged bend 90°	nr	4.00		-
J831.2	150 mm double flanged free acting check valve	nr	2.00		-
0001.2	To the state and state and state at the stat				
J811.4	250 mm dia double flanged gate valve after meter	nr	1.00		-
J351.3	150 mm dia flanged adaptor	nr	2.00		-
J322.2	250/150 mm dia flanged reducing tee	nr	2.00		-
J900.2	250 mm dia all flanged meter	nr	1.00		-
PA	GE 32 TOTAL CARRIED TO BILL 2.2.8 COLLECTION SH	IEET			-

	BILL 2.2.8 PUMP HOUSE									
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)					
NO.										
I412.6	150 mm dia double flanged pipe 4500 mm long	nr	2.00		-					
1413	250 mm dia double flanged pipe 7000 mm long	nr	1.00		-					
J352.2	250 mm dia blind flange	nr	1.00		-					
	Pipework to backwash tank									
173	DN 250mm HDPE pipe	m	100.00		-					
J612.1	Bends Dia 250 mm	No	3.00		-					
0012.1	Dia 250 mm	140	0.00							
P	AGE 33 TOTAL CARRIED TO BILL 2.2.8 COLLECTION	SHEET			_					

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.28 COLLECTION PAGE				
	PAGE 29 TOTAL				-
	PAGE 30 TOTAL				-
	PAGE 31 TOTAL				-
	PAGE 32 TOTAL				
					-
	PAGE 33 TOTAL				-
	BILL 2.28 BILL TOTAL TAKEN TO TREATMENT WORK	s			-

	BILL 2.2.9 Elevated Backwash 1	Tank - 1	08m³		<u> </u>
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
E	Foundation				
E322	Excavate in normal soil for tank raft foundation size 8.0m by 8.0m as per the given drawing	m ³	128.00		-
E330	Excavate in Rock for tank foundation	m ³	38.40		-
F611	Concrete Grade:15 for Blinding 20 mm aggregate	m³	2.88		-
F722	Supply all materials, deliver to site, mix and vibrate reinforce concrete class 20/20 . Rate to include all formwork, reinforcement bars for concrete footing and foundation bolts for the tower (cage Y12 @ 150mm both directions)	m ³	55.00		-
	Additional steel following design review	Kg	1,200.00		-
N	108 cum Pressed Steel Sectional Tank Erection				
N285.1	Supply, deliver and install 108m3 steel elevated tank on 18m tower.	sum	1.00		-
I	Plumbing Works				
I411.1	Supply and joint 100mm dia. steel pipes including all jointing materials for the inlet and outlet to the tank.	m	90.00		-
I411.2	Supply and joint 75mm dia. steel pipes including all jointing materials for the overflow and washout to the tank.	m	40.00		-
1411.3	Supply and joint including all jointing materials 100mm dia. pegler or equivalent gate valves.	nr	2.00		-
I411.5	Supply and joint including all jointing materials 75mm dia. pegler or equivalent gate valves.	nr	1.00		-
V	Painting				
V811	Supply and apply two coats of black bituminous paint to the inside of the tank.	m ²	188.00		-
V111.1	Supply and apply two coats of silver aluminium paint to the outside of the tank	m ²	188.00		-
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	Disinfection, sterilising and testing of the tank	Sum	1.00		-
ı	PIPEWORK-PIPES				
<u> </u>	Provide and lay uPVC class B pipes, with push fit joints, for scour/overflow pipe from tank to drain				
1712.2	OD 315 in trenches depth exceeding 1.5m	m	115.00		-
D.	AGE 35 TOTAL CARRIED TO BILL 2.2.9 COLLECTION SHEET				

ITEM		BILL 2.2.9 Elevated Backwash Tank - 108m3						
NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
J	PIPEWORK-FITTINGS AND VALVES							
	Bends -short radius							
	plain ended							
J611.1	OD300, 45 ⁰	nr	1.00		-			
	PIPEWORK-MANHOLE AND PIPEWORK ANCILLARIES							
KI51	Drainage manholes	nr	3.00		-			
K232	Provide all materials and construct gate valve chambers internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing	No	1.00		-			
	GE 36 TOTAL CARRIED TO BILL 2.2.9 COLLECTION SHEET				-			

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
	BILL 2.2.9 COLLECTION PAGE				
	PAGE 35 TOTAL				-
	PAGE 36 TOTAL				-
				İ	

	BILL 2.2.10 SLUDGE DRYIN	IG BED	<u>s</u>	1	T
			F	 REVISED QUAN	 TITIES
ITEM	DESCRIPTION	UNIT	QTY		AMOUNT (KShs)
	CLASS E: EARTHWORKS				
	Excavations shall include for strutting. Shuttering, stabilizing excavated surfaces and keeping excavations free of water bailing out, pumping or other means				
	Sludge drying beds 2 No. surface area of approx 10.0 m wide x 6.0 m long.				
E311	Topsoil, depth n.e 0.25m	m ³	80.00		-
E322	Material other than topsoil or rock depth 0.25 - 0.5m	m ³	80.00		-
E323	Ditto but depth 0.5 - 1.0m	m ³	160.00		-
E324	Ditto but depth 1.0 - 2.0m	m ³	300.00		-
E325	Ditto but depth 2.0 - 5.0m	m ³	900.00		-
E334	Rock depth 2.0 - 5.0m	m ³	270.00		-
E5	Excavation ancillaries Trimming of excavated surfaces				
E512	Material other than topsoil or rock, inclined at 45° Disposal of excavated material	m ²	200.00		-
E532	Material other than top soil or rock	m ³	1,200.00		-
E533	Rock	m ³	100.00		-
E6	Filling				
E044	<u>To structures</u>	3	040.00		
E614	Selected excavated material Provision of concrete	m ³	240.00		-
	<u>Frovision of concrete</u>				
1=000	Design Mix	2			
4F233	Grade: C15/20	m ³	15.00		-
2.1F263	Grade C25/30	m ³	96.00		-
	Placing of Concrete				
F511	Mass Concrete C15 Blinding, 50mm thick	m ³	15.00		-
	Placing of concrete cont'd				
	Reinforced Concrete				
F622.6	Base Slabs C30 - Base slab, minimum thickness, 250mm	m ³	40.00		_
1 022.0	C30 - Dase slab, Hillillilli tilickliess, 230Hilli	111	40.00		-
	Columns				
F622.4	C30 - 400X200mm	m ³	1.00		-
	Walls	_			
F622.2	C30 - 200mm walls	m ³	50.00		-
	<u>Distribution Channels</u>				
F622.4	C30 - 200mm base slab	m ³	3.00		-
F622.5	C30 - 125 mm walls	m ³	2.00		-
	GE 38 TOTAL CARRIED TO BILL 2.2.10 COLLECTION SHEET				-

	BILL 2.2.10 SLUDGE DRYIN	IG BED	<u>S</u>									
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)							
G	CONCRETE ANCILLARIES											
	Formwork - Rough finish											
	Horizontal to:-											
0010		2	07.00									
G212	Inlet and loading chambers Vertical to:-	m ²	37.00		-							
	TOTAL CONTROL OF THE PARTY OF T											
G213.1	Base slab - Width 0.3 m	m ²	42.00		-							
	Formwork - Fair Finish											
	Horizontal to:-											
G212	Distribution channel base	m ²	39.00		_							
<u> </u>			00.00									
0040.4	Vertical to:-	2	000.00									
G213.1	Walls surface	m ²	800.00		-							
G213.1	Channels Sides	m ²	103.00		-							
	Reinforcement											
	NOTE - No RC design done and reinforcement is estimated at											
	120kg/m ³ of concrete											
	High Yield steel bars to BS 4449 To Base Slab											
	TO Base Glab											
G529.1	Estimated T-Bar	t	5.74		-							
	PIPEWORK											
1421.1	DN 200 mm UPVC drain pipe	m	50.00		_							
I421.2	DN 300 mm UPVC drain pipe	m	50.00		-							
I421.3	DN 225 mm perforated UPVC drain pipe	m	20.00		-							
	MANHOLES											
	Allow for construction of the manholes, depths not exceeding											
K132	1.5m as shown by the Engineer	sum	1.00		-							
	METAL WORKS											
	Connection details at outlet from drying bed											
I511.1	GMS hand stop	nr	4.00		-							
	Supply of bed materials											
	Outply of bed materials											
E635.1	Supply graded sand	m ³	25.00		-							
E635.1	Supply Aggrgates 10-30 mm	m ³	25.00		-							
E635.1	Supply Aggrgates 30 - 50 mm	m ³	25.00		-							
					_							
E635.2	Supply graded hardcore 100-150 mm	m ³	377.00	1	-							
	Paving Slabs											
E635.1	Paving Slabs 400 x 600 x 75 mm	m ²	540.00		-							
PA	□ GE 39 TOTAL CARRIED TO BILL 2.2.10 COLLECTION SHEET				-							

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	4.10 COLLECTION PAGE				
	PAGE 41 TOTAL				-
	PAGE 42 TOTAL				-
	BILL 2.2.10 BILL TOTAL TAKEN TO TREATMENT WORK	S SUM	MAKY PAGE		-

BILL NO 2.2.11 ADMIN BUILDING								
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
G8	CONCRETE ACCESSORIES							
	Finishing of top surface							
G812.1	40mm screed, cement: sand 1:3, smooth trowel finish	m²	120.02		-			
0	TIMBER							
07	FITTINGS AND FASTENINGS							
O740	Bolts	nr	78.00		-			
08	ROOFING							
O811 O812	Roofing timber cypress 100x50 Ditto cypress 150x75	m	641.38 166.00		-			
O813	Ditto cypress 100x75	m m	543.00					
O814 O815	Ditto timber cypress 100x100 wall plate 300x25 Faccia Board	m m	25.45 45.40		-			
PAGE	41 TOTAL CARRIED TO BILL 2.2.11 COLLECTION PAGE				-			

	BILL NO 2.2.11 ADMIN BU	ILDING		1	1
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
O815	Cladding 26 gauge GCI sheeting	m²	115.05		
O816	Ridge cap	m	17.70		-
	- mag- cap				
U	BRICKWORK, BLOCKWORK & MASONRY				
U5	DENSE CONCRETE BLOCKWORK				
	One block construction				
	Blockwork ancillaries				
U492 U492.2	Damp proof course. 1000 gauge Damp proof Membrane	m m²	14.78 2.00		-
0492.2	1000 gauge Damp proof Membrane	m-	2.00		-
	Wall finishes				
G812.3	Allow for input of keys on external wall surfaces.	m²	110.00		-
G812.4	Allow for a 20mm live plaster rendering on internal walls and on reonforced concrete surfaces.	m²	249.00		-
V	PAINTING				
V523	2 coats of emulsion paint on wooden doors and windows	m²	32.00		_
V553	2 coats of emulsion paint to internal wall surface	m²	249.00		-
	·				
W	WATERPROOFING				
W1	DAMP PROOFING				
** 1	Rendering with proprietary mix mortar				
W153	Internal 20mm mortar rendering, cement/sand 1:4 painted "soft	m²	190.74		
W 103	white" to Ks10 B 15 or similar.	m-	190.74		-
W5	SPRAYED OR BRUSHED WATER PROOFING USING				
	(stated)				
=	External spray of tyrolean coloured soft white to Ks 10 B 15 or				
W50	similar	m²	212.30		-
	Precast Concrete Paving Slab				
	Precast Concrete Paving slabs size 600 x 600 x 50mm Thick				
E635.1	laid on and including 50mm thick bed of sand and jointing and	m ²	55.00		-
	pointing in cement mortar				
Х	MISCELLENEOUS WORK				
^	MISCELLENEOUS WORK				
Х3	DRAINAGE TO STRUCTURES ABOVE GROUND				
V224	Cuttors and guttors fittings	ne	25.40		
X331 X332	Gutters and gutters fittings Downpipes and all the fittings	m m	35.40 16.80		-
7,002	Dompiped and an are mange		10.00		
X6	WINDOWS				
X68	HD 11FS window as specified in th drawing	nr	2.00		-
X691 X692	HD 2FS window as specified in th drawing HD 4S window as specified in th drawing	nr nr	1.00 3.00		-
X693	2NE 5F window as specified in th drawing	nr	2.00		-
	,				
X7	DOORS		·		
X721	Wood, flush, external		2.00		
	Single leaf, standard, 800mm wide	nr	3.00		-
X724	Single leaf, standard, 900mm wide	nr	5.00		-
					1
704:0	Iron Mongery for doors				
Z341.2 Z343	Iron Mongery for doors 100 mm Brass butt hinges Pairs 5 lever system Multi lock complete with handles	nr nr	9.00 9.00		-

	BILL NO 2.2.11 ADMIN BU	ILDING	<u>IG</u>				
					ITITICO		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)		
X91	SUBSTRUCTURE WALLING						
X92 X92.1	CEILING Allow for fixing 12mm celotex ceiling	m²	64.26		_		
X92.1	Allow for the painting of the ceiling with Distemper	m ²	64.26		-		
X93	OTHERS		04.20				
X93.1	Provide for supply and installation of plumbing facilities in the house as specified in the drawing. Include for installation of water closets, cisterns shower fittings, stainless steel sinks, dhobi sinks, hand wash basins, overhead storage reservoir	Sum	1.00		-		
X93.2	Provide for supply and installation of all fitting in the house as specified in the drawing. Include for installation of table tops, store shelves above and under the bable tops,store shelves,and work tops, and other accessories	Sum	1.00		-		
X93.3	Provide for supply and installation of all clectrical fittings in the house as directed by the Engineer. Include for complete wiring, installation of consumer meters, power sockets, lighting systems and connection to existing grid as drected	Sum	1.00		-		
	SEDTIC TANK			1			
	SEPTIC TANK						
X931.1	Strip the site for the septic tank of all vagetation, tess stumps and shrups for depth not exceeding 200mm	m²	303.70		-		
E411.2	Excavation in nature earth for the house foundation to shape as directed for the septic tank	m³	36.00		-		
F511.2	Allow for placement of class 15 blinding concrete 50mm thick tank floor as indicated in drawings	m³	2.00		-		
F242	Allow for placement of class 20 concrete 200mm thick septic tank floor as indicated in drawings	m³	2.00		-		
F622.2	Allow for placement of class 25/20 reinforced concrete in septic tank walls, inlet, outlet base slabs, 200mm thick. Include for all formwork.	m³	6.00		-		
F622.3	Allow for supply of material and casting of class 25/20 reinforeced concrete slab for the septic tank as specified and directed by the Engineer. Include for all formwork	m³	2.00		-		
K851.1	Allow for manholes, installstion of stainless steel frames and manhole covers as shown in drawings and directed by Engineer	nr	4.00		-		
K851.2	Allow for construction of the vent pipes, inlet and outlet pipe connections. Allow for the construction of the reinforced 100mm thick sun baffle	sum	1.00		-		
K132	Allow for construction of the manholes, depths not exceeding 1.5m as shown by the Engineer	sum	1.00		-		
E324	Allow for trench excavation depth not exceeding 1.5m, supply and laying 8 inch PVC sewer/foulwater sewerline. Allow for connecting to the septic tank and testing.	m	300.00		-		
G561	Supply and install Fabric A142 mesh	m²	10.80		-		
U121	Blockwork & Masonry for Septic Tank Walls and Inspection Manholes	m²	51.79		-		
14/00 1	10		F0.F0		-		
W261	12mm water proofed cement rendering as per drawings	m²	53.50	+	-		
G524	Supply and install Reinforcement for Septic Tank and Inspection Manhole 43 TOTAL CARRIED TO BILL 2.2.11 COLLECTION PAGE	kg	350.30		-		

	BILL NO 2.2.11 A	DMIN BUILDING			
			R	EVISED QUAN	TITIES
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill No. 2.2.11 Collection Page				
1	BROUGHT FORWARD FROM PAGE 41				-
2	BROUGHT FORWARD FROM PAGE 42				-
4	BROUGHT FORWARD FROM PAGE 43				-
	BILL 2.2.11 BILL TOTAL TAKEN TO TREATMEN	IT WORKS SUR	AADV DAAC		-

	BILL NO. 2.2.12 - DOUBLE GRADE	9 STAF	F HOUSE		l
	BILL NO. 2.2.12 - DOUBLE GRADE	JOIAI	HOUSE		
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	REINFORCEMENT				
G520	Assorted sizes of reniforcement bars 8,10,12mm High Yield steel bars	kg	290.00		-
G570	Wire weld fabric BS Ref. A142	m²	40.97		-
P/	GE 45 TOTAL CARRIED TO BILL 2.2.12 COLLECTION PAGE	ļ			-

BILL NO. 2.2.12 - DOUBLE GRADE 9 STAFF HOUSE ITEM NO. SUPERSTRUCTURE WALLING SUPERSTRUCTURE WALLING SUPPLY John with sand cement motor 240mm thick masonry walling as specified in the drawing. Stone dressing to be specified and approved by the Engineer. U82.1. Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply, John with sand cement motor 240mm thick gable Supply John Supply,						
ITEM NO. SUPERSTRUCTURE WALLING Supply, join with sand cement motor 240mm thick masonry walling as specified in the drawing. Stone dressing to be specified and approved by the Engineer. U821.1 U821.2 U821.2 U821.3 U821.3 U821.3 U821.4 U821.4 U821.3 U821.4 U821.5 U821.5 U821.5 U821.5 U821.5 U821.6 U821.6 U821.6 U821.6 U821.7 U821.8 U8		DILL NO COAC POURIE ORANG	0.0745			
SUPERSTRUCTURE WALLING SUPERSTRUCTURE WALLING 182.11 182.11 182.12 182.12 182.12 182.12 182.12 182.13 182.14 182.15 182.15 182.15 182.16 183.16 184.16 185.17 185.18		BILL NO. 2.2.12 - DOUBLE GRADE	STAF	F HOUSE		
SUPERSTRUCTURE WALLING SUPPLY, join with sand cement motor 240mm thick masonry walling as specified in the drawing. Stone dressing to be specified and approved by the Engineer. Supply, join with sand cement motor 240mm thick gable Supply, join with sand cement motor 240mm thick gable be specified and approved by the Engineer. Supply, join with sand cement motor 240mm thick gable be specified and approved by the Engineer. Supply, join with sand cement motor 240mm thick gable be specified and approved by the Engineer. Supply, join with sand cement motor 340mm thick gable be specified and approved by the Engineer. Supply and install Class Louvered windows size 700mm x 750 nr 4.00 mr 2.00 mr	ITEM	DESCRIPTION	LINIT	QTY	RATE (KShs)	AMOUNT (KShs)
Supply, join with sand cement motor 240mm thick masonry willing as specified in the drawing, Stone dressing to be specified and approved by the Engineer. Supply, join with sand cement motor 240mm thick gable masonry walling as specified in the drawing, Stone dressing to be specified and approved by the Engineer. Wether the construction of the place chimney in masonry walling joined with sand coment motor as directed. Use 1.3 Allow for the construction of the place chimney in masonry willing joined with sand coment motor. FINISHES Floor finishes General Allow for placement of 25mm thick cement screened for floor finishes Allow for placement of 25mm thick cement screened for floor finishes Allow for placement of 25mm thick cement screened for floor finishes Allow for a florm cement render and painting of the external walls with a high quality water paint finish to be approved by the Engineer. General Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for the placement of precast reinforced concrete window shower and WC, finish to be approved by the Engineer. Black bituminous paint on substructure plinths Precast Concrete Paving slabs Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid and an including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CELING 2321.1 Allow for the placement of the ceiling with distenper DOORS AND WINDOWS Supply and install Glass Louvered windows size 700mm x 750 rn 1.00 2321.2 Supply and install Glass Louvered windows size 700mm x 2100mm rn 1.00	NO.		ON			
Supply, join with sand cement motor 240mm thick masonry willing as specified in the drawing, Stone dressing to be specified and approved by the Engineer. Supply, join with sand cement motor 240mm thick gable masonry walling as specified in the drawing, Stone dressing to be specified and approved by the Engineer. Wether the construction of the place chimney in masonry walling joined with sand coment motor as directed. Use 1.3 Allow for the construction of the place chimney in masonry willing joined with sand coment motor. FINISHES Floor finishes General Allow for placement of 25mm thick cement screened for floor finishes Allow for placement of 25mm thick cement screened for floor finishes Allow for placement of 25mm thick cement screened for floor finishes Allow for a florm cement render and painting of the external walls with a high quality water paint finish to be approved by the Engineer. General Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for the placement of precast reinforced concrete window shower and WC, finish to be approved by the Engineer. Black bituminous paint on substructure plinths Precast Concrete Paving slabs Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid and an including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CELING 2321.1 Allow for the placement of the ceiling with distenper DOORS AND WINDOWS Supply and install Glass Louvered windows size 700mm x 750 rn 1.00 2321.2 Supply and install Glass Louvered windows size 700mm x 2100mm rn 1.00		SUPERSTRUCTURE WALLING				
B812.5 masonry walling as specified in the drawing. Stone dressing to be specified and approved by the Engineer. Wall 1.3 value of the construction of the place chimney in masonry. Wall flow for the construction of the place chimney in masonry. Wall goined with sand cement mortar as directed. Wall flow for the construction of the place chimney in masonry. FINISHES Record floor in the placement using hoop iron in every other course. FINISHES Record floor in the placement of 25mm thick cement screened for floor finish. Wall finishes Rel12.1 Allow for installation of permanent vents on top of doors, windows and gables. Specifications to be approved by Engineer. Allow for a 10mm cement render and painting of the external walls with a high quality water paint finish to be approved by the Engineer. Record floor in a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Rel12.4 Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint upto height above ground floor in kitchen, shower and WC, finish to be approved by the Engineer. Rel12.5 Allow for the placement of precast reinforced concrete window sills as directed by the Engineer. Rel12.6 Allow for the placement of precast reinforced concrete window sills as directed by the Engineer. Rel12.6 Allow for the placement of precast reinforced concrete window sills as directed by the Engineer. Rel12.6 Precast Concrete Paving Slabb Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and printing in cement mortar around the house CEILING Rel13.1 Allow for the painting of the ceiling with distenper Rel13.1 Allow for the painting of the ceiling with distenper Rel13.2 Supply and install Class Louvered windows size 700mm x 750 nr 1.00 Rel13.1 Supply and install Solid flush door size 850mm x 2100mm with fantight	U821.1	walling as specified in the drawing. Stone dressing to be specified and approved by the Engineer.	m²	360.00		-
U491 Joint reinforcement using hoop iron in every other course m 377.40 U491 Joint reinforcement using hoop iron in every other course m 377.40	U821.2	masonry walling as specified in the drawing. Stone dressing to be specified and approved by the Engineer.	m²	6.00		-
FINISHES Floor finishes Allow for placement of 25mm thick cement screened for floor finish Wall finishes Allow for installation of permanent vents on top of doors, windows and gables. Specifications to be approved by Engineer Allow for a 10mm cement render and painting of the external walls with a high quality water paint finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for the placement of precast reinforced concrete window sills as directed by the Engineer. V Black bituminous paint on substructure plinths m² 6.18 Precast Concrete Paving Slab Precast Concrete Paving slabs size 600 x 600 x 50mm Thick lad on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CEILING C213.1 Allow for fixing 12mm celotex ceiling m² 82.00 DOORS AND WINDOWS Supply and install Glass Louvered windows size 700mm x 750 The concrete Paving slabs Supply and install Glass Louvered windows size 700mm x 750 Supply and install Framed legged and braced timber door size of the concrete paining the supply and install solid flush door size 850mm x 2100mm with familight Patient Supply and install solid flush door size 850mm x 2100mm with familight	U821.3		sum	1.00		-
Floor finishes Gallow for placement of 25mm thick cement screened for floor finish for content of 25mm thick cement screened for floor finish for content of 25mm thick cement screened for floor finish Wall finishes	U491	Joint reinforcement using hoop iron in every other course	m	377.40		-
Floor finishes Gallow for placement of 25mm thick cement screened for floor finish for content of 25mm thick cement screened for floor finish for content of 25mm thick cement screened for floor finish Wall finishes		FINISHES				
Wall finish		Floor finishes				
Allow for installation of permanent vents on top of doors, windows and gables. Specifications to be approved by Engineer Allow for a 10mm cement render and painting of the external walls with a high quality water paint finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint upto height above ground floor in kitchen, shower and WC, finish to be approved by the Engineer. Allow for the placement of precast reinforced concrete window sills as directed by the Engineer. V Black bituminous paint on substructure plinths m² 6.18 Precast Concrete Paving Slab Precast Concrete Paving slabs size 600 x 600 x 50mm Thick and on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CELIUNG O213.1 Allow for fixing 12mm celotex ceiling myth distenper m² 82.00 V533.1 Allow for the painting of the ceiling with distenper m² 82.00 DOORS AND WINDOWS Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.2 Supply and install Framed legged and braced timber door size 900mm x 2100mm	G812.1		m²	95.70		-
Allow for installation of permanent vents on top of doors, windows and gables. Specifications to be approved by Engineer Allow for a 10mm cement render and painting of the external walls with a high quality water paint finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint upto height above ground floor in kitchen, shower and WC, finish to be approved by the Engineer. Allow for the placement of precast reinforced concrete window sills as directed by the Engineer. V Black bituminous paint on substructure plinths m² 6.18 Precast Concrete Paving Slab Precast Concrete Paving slabs size 600 x 600 x 50mm Thick and on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CELIUNG O213.1 Allow for fixing 12mm celotex ceiling myth distenper m² 82.00 V533.1 Allow for the painting of the ceiling with distenper m² 82.00 DOORS AND WINDOWS Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.2 Supply and install Framed legged and braced timber door size 900mm x 2100mm		Wall finishes				
G812.4 Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. G812.4 Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint upto height above ground floor in kitchen, shower and WC, finish to be approved by the Engineer. G812.6 Allow for the placement of precast reinforced concrete window sills as directed by the Engineer. V Black bituminous paint on substructure plinths m² 6.18 Precast Concrete Paving Slab Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CELLING Q213.1 Allow for fixing 12mm celotex ceiling m² 82.00 V533.1 Allow for the painting of the ceiling with distenper m² 82.00 DOORS AND WINDOWS Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z331.3 Supply and install Framed legged and braced timber door size 900mm x 2100mm Z313.2 Supply and install solid flush door size 850mm x 2100mm with fanlight	G812.2	Allow for installation of permanent vents on top of doors, windows and gables. Specifications to be approved by	nr	24.00		-
with Emulsion paint, finish to be approved by the Engineer. Allow for a 10mm live plaster and painting for the internal walls with Emulsion paint upto height above ground floor in kitchen, shower and WC, finish to be approved by the Engineer. Allow for the placement of precast reinforced concrete window sills as directed by the Engineer. V Black bituminous paint on substructure plinths m² 6.18 Precast Concrete Paving Slab Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CEILING O213.1 Allow for fixing 12mm celotex ceiling m² 82.00 V533.1 Allow for the painting of the ceiling with distenper m² 82.00 DOORS AND WINDOWS Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 1.00 Supply and install Framed legged and braced timber door size 900mm x 2100mm Supply and install solid flush door size 850mm x 2100mm with fanlight	G812.3	walls with a high quality water paint finish to be approved by the	m²	110.00		-
With Emulsion paint upto height above ground floor in kitchen, shower and WC, finish to be approved by the Engineer. Allow for the placement of precast reinforced concrete window sills as directed by the Engineer. V Black bituminous paint on substructure plinths Precast Concrete Paving Slab Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CEILING O213.1 Allow for fixing 12mm celotex ceiling W533.1 Allow for the painting of the ceiling with distenper DOORS AND WINDOWS Supply and install Glass Louvered windows size 700mm x 1250 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.1 Supply and install Framed legged and braced timber door size 900mm x 2100mm The control of the ceiling with flushed or size 850mm x 2100mm with fanlight	G812.4		m²	249.00		-
sills as directed by the Engineer. V Black bituminous paint on substructure plinths Precast Concrete Paving Slab Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CEILING O213.1 Allow for fixing 12mm celotex ceiling W 82.00 V533.1 Allow for the painting of the ceiling with distenper DOORS AND WINDOWS Z321.1 Supply and install Glass Louvered windows size 700mm x 1250 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.1 Supply and install Framed legged and braced timber door size 900mm x 2100mm Supply and install solid flush door size 850mm x 2100mm with fanlight	G812.5	with Emulsion paint upto height above ground floor in kitchen,	sum	1.00		-
Precast Concrete Paving Slab Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CEILING O213.1 Allow for fixing 12mm celotex ceiling W ² 82.00 V533.1 Allow for the painting of the ceiling with distenper DOORS AND WINDOWS Supply and install Glass Louvered windows size 700mm x 1250 Table 1250 Supply and install Glass Louvered windows size 700mm x 750 Table 1250 The control of the ceiling with distenper The control of	G812.6		nr	10.00		-
Precast Concrete Paving Slab Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CEILING O213.1 Allow for fixing 12mm celotex ceiling W*2 82.00 V533.1 Allow for the painting of the ceiling with distenper DOORS AND WINDOWS Supply and install Glass Louvered windows size 700mm x 1250 T321.2 Supply and install Glass Louvered windows size 700mm x 750 nr Supply and install Framed legged and braced timber door size 900mm x 2100mm Supply and install solid flush door size 850mm x 2100mm with fanlight	V	Black hituminous paint on substructure plinths	m²	6.18		_
Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house CEILING O213.1 Allow for fixing 12mm celotex ceiling V533.1 Allow for the painting of the ceiling with distenper DOORS AND WINDOWS Z321.1 Supply and install Glass Louvered windows size 700mm x 1250 Table 1250 Z313.1 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.1 Supply and install Framed legged and braced timber door size 900mm x 2100mm Supply and install solid flush door size 850mm x 2100mm with fanlight The control of the painting of the ceiling with distenper The control of the painting of the ceiling with distenper The control of the painting and pointing and				0.1.0		
O213.1 Allow for fixing 12mm celotex ceiling m² 82.00 V533.1 Allow for the painting of the ceiling with distenper m² 82.00 DOORS AND WINDOWS Z321.1 Supply and install Glass Louvered windows size 700mm x nr 6.00 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.1 Supply and install Framed legged and braced timber door size 900mm x 2100mm Z313.2 Supply and install solid flush door size 850mm x 2100mm with fanlight	E635.1	Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and	m ²	55.00		-
V533.1 Allow for the painting of the ceiling with distenper m² 82.00 DOORS AND WINDOWS Z321.1 Supply and install Glass Louvered windows size 700mm x nr 6.00 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.1 Supply and install Framed legged and braced timber door size 900mm x 2100mm Z313.2 Supply and install solid flush door size 850mm x 2100mm with fanlight		CEILING		60.5-		
DOORS AND WINDOWS Z321.1 Supply and install Glass Louvered windows size 700mm x nr 6.00 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.1 Supply and install Framed legged and braced timber door size 900mm x 2100mm Z313.2 Supply and install solid flush door size 850mm x 2100mm with fanlight nr 1.00	O213.1	Allow for fixing 12mm celotex ceiling	m²	82.00		-
Z321.1 Supply and install Glass Louvered windows size 700mm x nr 6.00 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.1 Supply and install Framed legged and braced timber door size 900mm x 2100mm Z313.2 Supply and install solid flush door size 850mm x 2100mm with fanlight	V533.1	Allow for the painting of the ceiling with distenper	m²	82.00		-
Z321.1 1250 nr 6.00 Z321.2 Supply and install Glass Louvered windows size 700mm x 750 nr 4.00 Z313.1 Supply and install Framed legged and braced timber door size 900mm x 2100mm nr 1.00 Z313.2 Supply and install solid flush door size 850mm x 2100mm with fanlight nr 1.00						
Z313.1 Supply and install Framed legged and braced timber door size 900mm x 2100mm Supply and install solid flush door size 850mm x 2100mm with fanlight nr 1.00	Z321.1	* * *	nr	6.00		-
Z313.1 900mm x 2100mm Supply and install solid flush door size 850mm x 2100mm with fanlight 1.00 1.00 1.00	Z321.2	Supply and install Glass Louvered windows size 700mm x 750	nr	4.00		-
2313.2 fanlight III 1.00	Z313.1		nr	1.00		-
Supply and install solid flush door size 800mm v 2100mm with	Z313.2		nr	1.00		-
Z313.3 Supply and install solid flush door size solid flush with nr 5.00 PAGE 46 TOTAL CARRIED TO BILL 2.2.12 COLLECTION PAGE				5.00		-

	BILL NO. 2.2.12 - DOUBLE GRADE	SIAFI	HOUSE		
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
7044.0	Iron Mongery for doors		7.00		
Z341.2	100 mm Brass butt hinges Pairs	nr	7.00		-
Z343	5 lever system Multi lock complete with handles	nr	7.00		-
	ROOFING				
O213.3	Supply, join and place 150mm x 50mm timber rafters and ceiling hoists in trusses as specified in drawings	m	71.00		-
O213.4	Supply, join and place 100mm x 50mm timber ties in trusses as specified in drawings	m	75.00		-
O213.5	Supply, join and place 100mm x 50mm timber purlins in trusses as specified in drawings	m	75.00		-
O213.6	Supply, join and place 100mm x 50mm timber post in roof trusses as specified in drawings	m	75.00		-
N210.1	Supply and place gauge 26 plain iron sheet	m²	80.00		-
O213.7	Supply and place 50mm x 50mm timber ceiling brandering as specified in the drawings	m	101.00		-
O816	Ridge cap	m	12.05		-
O815	300x25 Faccia Board	m	45.40		-
X X3	MISCELLENEOUS WORK DRAINAGE TO STRUCTURES ABOVE GROUND				
X331	Gutters and gutters fittings	m	25.00		_
X332	Downpipes and all the fittings	m	6.00		-
	•				
	PLUMBING, FITTING AND FINIEHING WORKS				
X911.1	Provide for supply and installation of pluming facilities in the two houses as specified in the drawings. Include for installation of water closetsm cisterns shower fittings, stainless steel sinks, dhobi sinks, hand wash basins, overhead storage reservoir	sum	1.00		-
X911.2	Provide for supply and installation of all fitting in the two houses as specified in the drawings. Include for installation of table tops, shelves above and under the table tops, wardrobes, store shelves, kitchen shelves and work tops, and other accessories.	sum	1.00		-
X911.3	Provide for supply and installation of all electrical fittings in the two houses as directed by the Engineer. Include for complete wiring, installation of consumer meters, power sockets, lighting syetems and connection to existing gird as directed	sum	1.00		-
X911.4	Allow for supply of material including concrete posts, and fencing with chicken mesh wire, 2.5m high fence for the two housad surrouds as directed. Including for installstion of two 5m wide double leaf gates.	sum	1.00		-
X91.54	Allow for grading the houses access road and placement of murram wearing sueface to the houses as dorected by the Engineer.	m	400.00		-
X921	WATER WORK Supply and install 600mm x 600m x 500 fibre water tank as directed by Engeneer.	nr	4.00		-
V533.2	Allow for painting of the water tank with 25mm block paint shelf paint finish	m³	43.00		-
	SEPTIC TANK				
X931.1	Strip the site for the septic tank of all vagetation, tess stumps and shrups for depth not exceeding 200mm AGE 47 TOTAL CARRIED TO BILL 2.2.12 COLLECTION PAGE	m²	303.70		-

	BILL NO. 2.2.12 - DOUBLE GRADE	9 STAF	HOUSE	_	
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
E411.2	Excavation in nature earth for the foundation to shape as directed for the septic tank	m³	36.00		-
E443	Ditto but Excavation in Rock material	m³	10.80		-
F511.2	Allow for placement of class 15 blinding concrete 50mm thick tank floor as indicated in drawings	m³	2.00		-
F242	Allow for placement of class 20 concrete 200mm thick septic tank floor as indicated in drawings	m³	2.00		-
F622.2	Allow for placement of class 25 reinforced concrete in septic tank baffle walls, inlet, outlet base slabs, 200mm thick. Include for all formwork.	m³	6.00		-
F622.3	Allow for supply of material and casting of class 25 reinforeced concrete slab for the septic tank as specified and directed by the Engineer. Include for all formwork	m³	2.00		-
K851.1	Allow for manholes, installstion of stainless steel frames and manhole covers as shown in drawings and directed by Engineer	nr	4.00		-
K851.2	Allow for construction of the vent pipes, inlet and outlet pipe connections. Allow for the construction of the reinforced 100mm thick sun baffle	sum	1.00		-
K132	Allow for construction of the manholes, depths not exceeding 1.5m as shown by the Engineer	sum	1.00		-
E324	Allow for trench excavation depth not exceeding 1.5m, supply and laying 8 inch PVC sewer/foulwater sewerline. Allow for connecting to the septic tank and testing.	m	300.00		-
G561	Supply and install Fabric A142 mesh	m²	4.00		-
U121	Blockwork & Masonry for Septic Tank Walls and Inspection Manholes	m²	51.79		-
W261	12mm water proofed cement rendering as per drawings	m²	53.50		-
G524	Supply and install Reinforcement for Septic Tank and Inspection Manhole	kg	350.30		-
	AGE 48 TOTAL CARRIED TO BILL 2.2.12 COLLECTION PAGE				

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.2.12 COLLECTION PAGE				
	PAGE 45 TOTAL				-
	PAGE 46 TOTAL				-
	PAGE 47 TOTAL				-
	PAGE 48 TOTAL				-
	Total for 1 Double 9 Grade Houses Total for 2 Double 9 Grade Houses				-
	BILL 2.2.12 TOTAL TAKEN TO TREATMENT WORKS	SUMMA	RY PAGE		-

			0=1/	DATE ((C)	AMOUNT #50:
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	CLASS F: INSITU CONCRETE:				
	Mass Concrete Class 15/20mm :-				
F511	50mm Thick blinding under foundation footing, column bases	m ³	1.35		-
	Reinforced Concrete Class 25/20mm:-				
F622.1		m ³	4.04		
F622.1	200 x 300 mm ring beam concrete	m°	4.04		-
	Reinforced Concrete Class 25/20mm:-				
F622.2	600 x 200 mm strip footings	m ³	5.38		-
F622.4	150 mm thick reinforced concrete slab	m ³	6.15		-
	CLASS G: CONCRETE ANCILLARIES Formwork				
	Provide and Fix Shuttering Including Propping, Strutting				
	and Striking, all as Specified				
G143	Formwork - Rough Finish:- Vertical sides columns below the ground level	m ²	20.00		_
0140	vortidal stade dolarimo bolow trie ground level	111	20.00		
0040.1	Formwork - Fair Finish:-	2	00.00		
G213.1	Vertical Sides of the columns	m ²	20.00	1	-
G213.2	Vertical sides of ring beam	m ²	40.37		-
	Reinforcement				
	Provide and Fix High Tensile Steel Reinforcement to SRN				
	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified :-				
G522	8 mm diameter	kg	1,344.00		-
G523	10 mm diameter	kg	278.85		-
G524 G5245	12 mm diameter 16 mm diameter	kg kg	250.60 50.00		-
G3243	10 mm dameter	kg	50.00		-
	Fabric Reinforcement No. A142 Mesh Size 150 x 150mm				
	Weighing 2.22 kgs Per m ² , Including Bends, Tying Wire				
	and Distance Blocks:- Fabric reinforcement with minimum 150mm wide side and end				
G561	laps, laid in bed- A142 mesh at 25mm from the top	m ²	40.97		-
	Concrete Accessories				
G812	Trowel finish of top surfaces	m ²	80.00		-
	1	1		1	i e

	BILL 2.2.13 OPERATOR'S	HOUSE			
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	CLASS U: BRICKWORK, BLOCKWORK AND MASONRY				
	Walling				
	Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):-				
	Someon and Tollicon in Comone Mortal (1.0).				
	Substructure Walling	_			
U821	200 mm thick stone masonry wall in strip foundation	m ²	72.00		-
	Structure Walling				
U811	150 mm thick stone	m ²	172.00		-
	Damp-Proof Course:				
	Bituminous Felt Damp-Proof Course as Described:-				
11700	200mm Mide weden welle		100.00		
U782	200mm Wide under walls	m	120.00		-
	<u>Finishes</u>				
G812.1	15mm Cement and sand (1:4) render to plinth walls, finished with a wood float	m ²	35.00		-
G813	Prepare and apply two coats of bituminous paint on rendered plinth walls	m ²	35.00		-
	Wall Finishes				
	12 mm Lime plaster : steel trowelled finish : on concrete, blockwork or stonework : to				
G812.2	Internal walls	m ²	240.00		-
G812.6	Allow for the placement of precast reinforced concrete window sills as directed by the Engineer.	nr	10.00		-
	CEILING FINISHES				
	12 mm Lime plaster : steel trowelled finish : on concrete : to				
G812.3	Horizontal concrete soffits	m ²	70.00		-
	CLASS O: TIMBER				
	Roof				
O213.1	50 x 150 mm Rafter: in trusses	m	81.00		-
O213.2	75x 50 mm: battens	m	165.00		-
O213.3	150 x 50 mm: Struts and ties	m	96.00		-
O213.4	50 x 100 mm Wall plate: fixed to concrete with approved bolts at 1000 mm centres	m	33.00		-
O213.5	50 x 125 mm purlins	m	108.00		
0210.0	JO X 120 Hill pulling		100.00		
0213.6	300 x 25 mm Fascia Board	m	40.00		-
N210.1	Steel angle cleats 100 x 100 x 3mm thick	nr	84.00		-
N210.2	16mm diameter high density rag bolt 150mm long built into beam: including nut and washer	nr	250.00		-
	Cladding				
N210.3	24 gauge IT5 sheeting	m ²	100.00		-
N210.4	Ridge cap Windows	m	50.00		-
Z321.1	1600 x 1200 mm steel casement windows with grills	nr	4.00		-
Z321.2	700 x 600 mm steel casement windows with grills	nr	1.00		-
Z321.3	700 x 600 mm steel casement windows to washrooms with grills	nr	2.00		-
	AGE 51 TOTAL CARRIED TO BILL 2.2.13 COLLECTION PAGE			+	-

	BILL 2.2.13 OPERATOR'S	HOUSE			
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
G812.6	Allow for the placement of precast reinforced concrete window sills as directed by the Engineer.	nr	10.00		-
	, ,				
	Doors				
Z313.1	50 mm Single leaf Panel composite door unit (overall) size 900 x 2400 mm high: comprising 50 x 150 mm stiles, top, and middle rails, 50 x 200 mm bottom rail; 1 no. door leaf size 900 x 2050mm: panels infilled with 50 mm hardwood boarding rebated and splayed at joint to frame: 900 x 300mm high fan light infilled with glass (m/s)	nr	4.00		-
7202	Steel External Doors		2.00		
Z323	900 x 2400 mm high single leaf Toilet Cubicle doors	nr	2.00		-
Z313.2	800 x 1800 mm high	nr	2.00		_
2010.2	OCC X 1000 Hill High		2.00		
	Supply and fix the following ironmongery as per "Assa Abloy" catalogue to Engineers approval; to timber; with matching screws				
Z313.3	100 mm Brass butt hinges Pairs	nr	16.00		-
Z313.4	Rubber door stops	nr	8.00		-
Z313.5	5 lever system Multi lock complete with handles	nr	4.00		-
Z313.6	Two lever mortice lock with handles	nr	4.00		-
Z313.7	150 mm Brass barrel bolt	nr	8.00		-
	Ceiling				
	12mm thick approved chipboard to BS 2604, Part 2, density				
	480-640kgs, per square meter 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				
O213.6		2	70.00		
	Horizontal ceiling fixed to underside of trusses	m ²	72.00		-
O213.6	12 mm cornice 50mm high, plugged	m	80.00		-
Х	MISCELLENEOUS WORK				
X3	DRAINAGE TO STRUCTURES ABOVE GROUND				
X331	Gutters and gutters fittings	m	25.00		_
X332	Downpipes and all the fittings	m	6.00		-
	g-				
	Precast Concrete Paving Slab				
E635.1	Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house	m ²	55.00		-
	Other				
X911.1	Provide for kitchen shelves, cupboards and flue	SUM	1.00		-
X911.2	Kitchen sink with 125mm concrete slab area	nr	1.00	1	-
X911.3	100 mm upvc vent pipes 200 mm long	nr	22.00		-
	CLASSV: PAINTING				
	Prepare and Apply Three Coats Exterior Quality Plastic				
	Emulsion Paint:-(Provisional)				
V543	Fair-faced concrete surfaces	m ²	315.00		-
	PLUMBING ANDSANITARY WORKS				
		SUM	1.00		-
X921.1	12.5mm Diameter class B GI pipes and fittings				i
X921.1 X921.2	Allow for other fiitings e.g gate valves, flexible	SUM	1.00		-
	Allow for other fiitings e.g gate valves, flexible Twyford or equivalent wash hand basin size 450 x 300 mm		1.00		-
X921.2	Allow for other fiitings e.g gate valves, flexible Twyford or equivalent wash hand basin size 450 x 300 mm complete with chromium plate taps and chained plastic plug.	SUM			-
X921.2	Allow for other fiitings e.g gate valves, flexible Twyford or equivalent wash hand basin size 450 x 300 mm	SUM			-
X921.2 X921.3	Allow for other fiitings e.g gate valves, flexible Twyford or equivalent wash hand basin size 450 x 300 mm complete with chromium plate taps and chained plastic plug. Twyford or equivalent vitreous china low level pedestal WC suite complete with 9-10litres plastic cistern, P trap, black heavy duty set & cover, cover flush pipe and all necessary	SUM nr	1.00		-

	BILL 2.2.13 OPERATOR'S	HOUSE			T
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
X921.5	600 x 600 mm beveled edge polished plate glass mirrors and field packing including fixing with chromium plated dove nuts and brass screws.	nr	1.00		-
X921.6	750 litre overhead tank	nr	1.00		-
X921.7	100mm Diameter PVC soil pipe class B, include all necessary fittings.	m	25.00		-
X921.8	Ditto but 150mm Dia	m	40.00		-
X921.9	Ditto but 40mm Dia	m	25.00		-
X921.10	Allow for fittings and accessories for above	SUM	1.00		-
X921.11	Construct 800 x 800mm x 1200mm deep inspection manholes, plaster internal faces and provide heavy duty manhole covers.	nr	2.00		-
X921.12	Allow for 20mm dia GI pipework for the shower	SUM	1.00		-
X921.13	Supply and fix ceramic type soap dish	nr	1.00		-
X921.14	Supply and fix tissue paper holder	nr	1.00		-
	ELECTRICAL WORKS				
X931.1	Laying conduits, wiring works, fixing fittings, testing and commissioning works:-	SUM	1.00		-
	Fix electical fittings which include the following schedule:				
X931.2	(i) Living room - 2 No twin sockets, 1No spherical screw neck fitting & 1No twin switch;	nr	4.00		-
X931.3	(ii) Kitchen - 1 No twin sockets, 1 No bulb lightfitting, 1 No switch;	nr	3.00		-
X931.4	(iii) Bedrooms - 2 No socket, 2 No bulb light fitting, 2 No switches	nr	6.00		-
X931.5	(iv) Shower - 1 No covered bulb, 1 No switch;	nr	2.00		-
X931.6	(v) Toilet - 1 No covered bulb, 1No switch;	nr	2.00		_
X331.0	(v) Tollet - Tivo covered build, Tivo switch,	111	2.00		-
X931.7	(vi) General areas - 1 No bulb fitting;	nr	1.00		-
X931.8	(vi) Store - 1 No covered bulb, 1 No twin switch;	nr	2.00		-
X931.9	(vii) External areas - 2 No bulb fittings with protection cover	nr	2.00		-
X931.10	(viii) SPN consumerer Unit	nr	1.00		-
X931.1	SEPTIC TANK Strip the site for the septic tank of all vagetation, tess stumps and shrups for depth not exceeding 200mm	m²	303.70		-
E411.2	Excavation in nature earth for the foundation to shape as	m³	36.00		-
E443	directed for the septic tank Ditto but Excavation in Rock material	m³	10.80		-
F511.2	Allow for placement of class 15 blinding concrete 50mm thick tank floor as indicated in drawings	m³	2.00		-
F242	Allow for placement of class 20 concrete 200mm thick septic tank floor as indicated in drawings	m³	2.00		-
F622.2	Allow for placement of class 25 reinforced concrete in septic tank baffle walls, inlet, outlet base slabs, 200mm thick. Include for all formwork.	m³	6.00		-
PA	GE 53 TOTAL CARRIED TO BILL 2.2.13 COLLECTION PAGE				-

	BILL 2.2.13 OPERATOR'S	HOUSE			I
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
F622.3	Allow for supply of material and casting of class 25 reinforeced concrete slab for the septic tank as specified and directed by the Engineer. Include for all formwork	m³	2.00		-
K851.1	Allow for manholes, installstion of stainless steel frames and manhole covers as shown in drawings and directed by Engineer	nr	4.00		-
K851.2	Allow for construction of the vent pipes, inlet and outlet pipe connections. Allow for the construction of the reinforced 100mm thick sun baffle	sum	1.00		-
K132	Allow for construction of the manholes, depths not exceeding 1.5m as shown by the Engineer	sum	1.00		-
E324	Allow for trench excavation depth not exceeding 1.5m, supply and laying 8 inch PVC sewer/foulwater sewerline. Allow for connecting to the septic tank and testing.	m	300.00		-
G561	Supply and install Fabric A142 mesh	m²	4.00		-
U121	Blockwork & Masonry for Septic Tank Walls and Inspection Manholes	m²	51.79		-
W261	12mm water proofed cement rendering as per drawings	m²	53.50		-
G524	Supply and install Reinforcement for Septic Tank and	kg	350.30		-
	Inspection Manhole				
D.	AGE 54 TOTAL CARRIED TO BILL 2.2.13 COLLECTION PAGE				

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.2.13 COLLECTION PAGE				
	PAGE 50 TOTAL				-
	PAGE 51 TOTAL				-
	PAGE 52 TOTAL				-
	PAGE 53 TOTAL				-
	PAGE 54 TOTAL				-
	DILL O 40 TOTAL TAKEN TO TOTAL TAKEN	01/22	NDV DAGE		
	BILL 2.2.13 TOTAL TAKEN TO TREATMENT WORKS	SUMMA	AKY PAGE		-

	BILL 2.2.14 - ACCESSSORY SI	TF WO	RKS		
	BILL 2.2.14 - AGGEOGGAT OF	IL WO	<u>IXIXO</u>		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
NO.				,	,
1	FENCING AND GATES				
	Excavate for post holes, provide all materials and construct				
4.4	chain link fence (Gauge 12.5g, mesh size 80mm x80mm,		450.00		
1.1	height 8feet) on concrete posts at 3m centre to centre as	М	450.00		-
	specified by the engineer including straining posts at every 10th post and additional posts at corners.				
	Provide all materials and construct Pedestrian gate 2.0m wide				
1.2	including 2 Nr. Pillars, footings, etc. as directed by the engineer	Nr	1.00		_
	including 2 mil. I maile, recarrige, etc. ac an estea by the engineer		1.00		
	Provide all materials and construct steel main gate gate 4-5m				
1.2	wide including 2 Nr. Pillars, footings, etc. as directed by the	Nr	1.00		-
	engineer				
	SOAKAWAY PIT				
2	CLASS E: EARTHWORKS				
	Excavation				
2.1	Excavate in bulk for circular soak away pit, depth not exceeding	m ³	5.00		_
	1.0m commencing from existing ground surface				
2.2	Ditto but depth range 1-6m	m ³	22.62		-
2.3	Ditto but excavation in rock	m ³	6.79		-
	Filling to completed structures including compaction as				
0.0	specified	3	4.00		
2.3	Selected excavated material other than topsoil, rock or artificial hard material top 300 mm	m ³	1.00		-
2.4	Approved hardcore fill soak away pit 3.0 m deep	m ³	15.00		
2.4	Approved hardcore iiii soak away pit 5.0 iii deep	m.	13.00		-
	Mass Concrete				
F622.1	Class 15 mass concrete at bottom of masonry walls	m ³	0.50		_
1 022.1	Reinforced Concrete Class 25/20mm:-	1111	0.00		_
F622.1	Class 20/20 concrete for top cover slab	m ³	1.00		_
· OLL.	Olass 20/20 condicte for top cover slab	- '''	1.00		
	Provide and Fix High Tensile Steel Reinforcement to SRN				
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 Including Cutting, Bending, Propping with Spacers				
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:-				
G522	127 Including Cutting, Bending, Propping with Spacers	kg	25.00		-
G522 G523	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified :-	kg kg	25.00 100.00		-
	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified :- 8 mm diameter 12 mm diameter Walling				-
	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced				-
	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded,				-
G523	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):-	kg	100.00		-
	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded,				-
G523 U821	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation	kg	100.00		-
G523	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS	kg	100.00		-
G523 U821	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels	kg	100.00		-
G523 U821	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete	kg	15.00		-
G523 U821	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20	kg	100.00		-
G523 U821	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20 concrete foundation and haunch 125 mm thick including all	kg m ²	15.00		-
G523 U821	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20	kg m ²	15.00		-
U821 3	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20 concrete foundation and haunch 125 mm thick including all excavation, shuttering, jointing and bedding as specified E.O. Item 2.2.1 for kerbs laid to radius n.e. 20 m	kg m ²	15.00		-
U821 3	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20 concrete foundation and haunch 125 mm thick including all excavation, shuttering, jointing and bedding as specified	kg m ²	15.00		-
G523 U821 3 3.1	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified: 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20 concrete foundation and haunch 125 mm thick including all excavation, shuttering, jointing and bedding as specified E.O. Item 2.2.1 for kerbs laid to radius n.e. 20 m Provide, lay and joint 125 mm x 100 mm precast concrete channels on and including 225 mm x 125 mm Class 15/40	m ²	100.00 15.00 100.00 50.00		-
U821 3	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified: 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20 concrete foundation and haunch 125 mm thick including all excavation, shuttering, jointing and bedding as specified E.O. Item 2.2.1 for kerbs laid to radius n.e. 20 m Provide, lay and joint 125 mm x 100 mm precast concrete channels on and including 225 mm x 125 mm Class 15/40 concrete bed and haunch 100 mm thick including all	kg m ²	15.00		-
G523 U821 3 3.1	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified: 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20 concrete foundation and haunch 125 mm thick including all excavation, shuttering, jointing and bedding as specified E.O. Item 2.2.1 for kerbs laid to radius n.e. 20 m Provide, lay and joint 125 mm x 100 mm precast concrete channels on and including 225 mm x 125 mm Class 15/40	m ²	100.00 15.00 100.00 50.00		-
G523 U821 3 3.1	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified: 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20 concrete foundation and haunch 125 mm thick including all excavation, shuttering, jointing and bedding as specified E.O. Item 2.2.1 for kerbs laid to radius n.e. 20 m Provide, lay and joint 125 mm x 100 mm precast concrete channels on and including 225 mm x 125 mm Class 15/40 concrete bed and haunch 100 mm thick including all	m ²	100.00 15.00 100.00 50.00		-
G523 U821 3 3.1 32 3.3 3.4	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified: 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20 concrete foundation and haunch 125 mm thick including all excavation, shuttering, jointing and bedding as specified E.O. Item 2.2.1 for kerbs laid to radius n.e. 20 m Provide, lay and joint 125 mm x 100 mm precast concrete channels on and including 225 mm x 125 mm Class 15/40 concrete bed and haunch 100 mm thick including all excavation, shuttering, jointing and bedding as specified E.O. Item for channels laid to radius n.e. 3.0m	m ²	100.00 15.00 100.00 50.00		-
G523 U821 3 3.1 32 3.3 3.4 3.5	127 Including Cutting, Bending, Propping with Spacers and Tying as Specified:- 8 mm diameter 12 mm diameter Walling Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):- 200 mm thick stone masonry wall in strip foundation ROADS AND FOOTPATHS Kerbs and Channels Provide, lay and joint 255 mm x 125 mm precast concrete kerbs on and including 250 mm x 100 mm Class 15/20 concrete foundation and haunch 125 mm thick including all excavation, shuttering, jointing and bedding as specified E.O. Item 2.2.1 for kerbs laid to radius n.e. 20 m Provide, lay and joint 125 mm x 100 mm precast concrete channels on and including 225 mm x 125 mm Class 15/40 concrete bed and haunch 100 mm thick including all excavation, shuttering, jointing and bedding as specified	m ²	100.00 15.00 100.00 50.00		-

	BILL 2.2.14 - ACCESSSORY S	ITE WO	<u>KNS</u>		
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
	Concrete Block Paved Roads				
	Sub-Base and Base Courses: Provide, Lay and Compact to required relative density as per Clause 304 of Specifications:				
3.6	Hand packed hardcore compacted to CBR not less than 30 up to formation level (where road is in fill)	m ³	100.00		-
3.7	Base 200mm thick crusher run or quarry chips (hand packed), including for watering and stone dust blinding as directed.	m ²	300.00		-
3.8	200mm murram, include for watering and stone dust blinding as directed	m ²	300.00		-
3.9	Provide and apply approved weed killer / herbicide to road surface in accordance with manufacturer's instructions	m ²	300.00		-
	Concrete Block Paving (as Manufactured by Bamburi Special Products Ltd. or Other Approved Supplier) Supply and lay Medium Duty Paving Blocks, 60mm thick,				
3.10	Minimum strength 37-41N/mm² laid on and including 50mm thick sand bed and compacted by surface vibration	m ²	300.00		-
4.00	Footpaths				
1.00	Provide and lay:				
4.10	100mm murram sub-base, compacted to Engineer's approval	m ²	150.00		-
4.20	50mm thick concrete bed for footpath (Class 15)	m ²	150.00		-
	Landscaping				
Z83.1	Carry out landscaping of all open areas within the treatment works including cut and fill and planting of grass	m ²	1,875.00		-
	-				
		1			
	 AGE 57 TOTAL CARRIED TO BILL 2.2.14 COLLECTION PAGE				

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.2.14 COLLECTION PAGE				
	PAGE 56 TOTAL				-
	PAGE 57 TOTAL				-
	BILL 2.2.14 TOTAL TAKEN TO TREATMENT WORK	KS SUM	IMARY	<u> </u>	-
			-		

	BILL 2.2 TREATMENT WORKS GRAND SUMMARY PAGE							
ITEM NO.	DESCRIPTION		QTY	RATE (KShs)	AMOUNT (KShs)			
	BILL 2.2 4000M3/DAY TREATMENT WORKS SUMMARY PAG	E						
2.2.1	Demolition and Site Clearance				-			
2.2.2	Flocculation Units				-			
2.2.3	Sedimentation Basins				-			
2.2.4	Filters				-			
2.2.5	500 m ³ Clear Water Tank				-			
2.2.6	Chemical House				-			
2.2.7	Chlorination House				-			
2.2.8	Pump House				-			
2.2.9	Backwash Tank				-			
2.2.10	Sludge Drying Beds				-			
2.2.11	Administration Building				-			
2.2.12	Staff Houses				-			
2.2.13	Operator Staff House				-			
2.2.14	Accessory Site Works				-			
·								
	BILL 2.2 TOTAL CARRIED TO COLLECTION PAGE				-			

TEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	CLASS A: GENERAL ITEMS			(
	Specified Requirements				
	<u>Testing of works</u>				
	Carry out pressure testing, cleansing and sterilising of the				
	pipeline in accordance with clauses 440 and 441 of the				
	specification.				
A260.1	Pipe bore n.e 400mm	m	80.00		
	CLASS D:DEMOLITION AND SITE CLEARANCE				
	clearance shall include demolition and removal of natural and				
	artificial articles, objects and obstructions which are above the				
	original surface. Items for demolition and site clearance shall				
	be deemed to include disposal of materials arising. Items for				
	general clearance include removal of hedges and removal of				
	hedges stumps of any diameter and disposal of materials				
	arising of. Items for removal of trees shall include removal of				
	stumps where required. The girth shall be measured 1m above				
	the ground level. (provisional)				
D040	One and also are a few windling months of all about a Oleanna.	1	0.40		
D210	General clearance for pipeline route of all shrubs. Clearance	ha	0.10		
D040	width not exceeding 2m.		0.00		
D210	Trees of girth 500mm - 1m	nr	3.00		
D220	Trees of girth 1-2m	nr	3.00		
	CLASS I: PIPEWORK - PIPES				
	Supply and Transport to site. Transport from site store, lay and				
	joint pipes in trench, include for excavation, preparation of				
	surfaces, disposal of excavated material, shoring sides of				
	excavation and backfilling. Note:- Trench width and minimum				
	cover to pipes is as per the Specifications. The cost shall				
	include for strutting, shuttering, stabilizing the earth faces of				
	trenches and keeping the trenches free of water from whatever				
	source by pumping or other means and cost of use of selected				
	soil from the excavated material for compaction in bed and				
	surround to backfilling of trenches, all as specified.				
17	Approved High Density Polyethylene Pipes (HDPE)				
170	Name in al Davis DN 000 DN 40 in Translation				
173	Nominal Bore DN 280 , PN 16 in Trenches				
1700	Double to a 4.5 to		00.00		
1732	Depth n.e 1.5 m	m	60.00		
	CLASS I. DIDEWORK FITTINGS AND VALVES				
	CLASS J: PIPEWORK - FITTINGS AND VALVES				
	All Estimate to DN 40. Dutt funion fittings for DN 440 and above				
	All Fittings to PN 16. Butt fusion fittings for DN 110 and above				
	while Compression fittings for DN90 and below. Rate to include for all Steel-HDPE connection fittings where applicable.				
	Tor all Steel-HDPE connection littings where applicable.				
					+
	Air Valves and Washouts				
	Supply, handle, deliver to site, fix in place and test inclusive of				
	all fittings, including flanged tees,saddle clamp, nipples and				
	steel fittings, steel pipes inclusive (rate to exclude construction				
	of chambers).				
	DN100mm Vent-O-Matt RBX series or similar approved flanged	NI-	1.00		
J861.1	double orifice air release and vacuum break valve	No	1.00		
		NI.	1.00		
J863.1	DN100mm diameter socket to spigot piece with thrust flange,	No.	1.00		
	900mm long-WO	k I	4.00		
J863.2	DN100mm diameter double spigot piece, 15000mm long-WO	No.	1.00		
J863.3	DN100mm diameter double flanged riser piece, 2000mm long-	No.	1.00		
	Cut to suit-AV				
	PAGE 1TOTAL CARRIED TO BILL 2.3.1 COLECTION PAGE	Ì		I	

	BILL No. 2.3.1 RAW WATER GRAVITY MAIN						
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)		
	Supply, handle, deliver to site, fix in place inclusive of all						
	jointing fittings/accessories and test Sluice valve and gate valve						
	to Tees						
J811.7	DN 280 flanged Sluice Valves to BS 5163 type "Glenfield/avk" PN16 or approved equivalent	No	1.00		-		
381.7	Meters Ditto but DN280mm-Woltmann zonal bulk water meters	No	1.00		-		
	BENDS						
	Supply, handle, deliver to site, fix in place and test inclusive of all fittings bends as directed by the Engineer. For:						
	Bends 90 ⁰						
612.1	Dia 280 mm	No	5.00		-		
	Bends 45 ⁰						
	Dia 280 mm	No.	2.00		-		
	CLASS K: PIPEWORK - MANHOLES AND PIPEWORK						
	ANCILLARIES						
	Chambers						
	Supply and deliver materials on site, excavate for a construct						
	complete chambers including precast concrete cover slabs						
	where necessary as shown on the drawing						
	Provide all materials and construct WASHOUT chambers						
	internal dimensions 1400mm x 1400mm. Include for supply and						
	fixing of lockable concrete cover and step irons, as detailed in						
	drawing						
K231	Depth: not exceeding 1 m	No	1.00		-		
	Provide all materials and construct CONTROL VALVE						
	chambers internal dimensions 1000mm x 1200mm. Include for						
	supply and fixing of lockable cover and step irons, as detailed						
	in drawing						
K232	Depth: not exceeding 3 m	No	1.00		-		
	Provide all materials and construct AIR VALVE chambers						
	internal dimensions 1400mm x 1400mm. Include for supply and						
	fixing of lockable concrete cover and step irons, as detailed in drawing						
K234	Depth: not exceeding 3 m	No	1.00		-		
	PAGE 2 TOTAL CARRIED TO BILL 2.3.1 COLECTION PAGE				-		

ITEM	BILL No. 2.3.1 RAW WATER GRA	VITY N	/AIN		
LIVI	DESCRIPTION	UNIT		RATE (KShs)	AMOUNT (KShs)
	Other Pipework Ancillaries			, /	
	Pipe markers shall be made from reinforced precast concrete				
	to detail. This item shall be deemed to include supply and fixing				
	the pipe markers and painting as directed by the engineer.				
K820.1	Pipeline marker post	nr	2.00		-
K820.2	Air valve marker post	nr	1.00		
K820.3	Washout marker post	nr	1.00		-
K820.4	Sluice Valve marker post	nr	1.00		-
	CLASS L: PIPEWORK – SUPPORTS AND PROTECTION,				
L111	ANCILLARIES TO LAYING AND EXCAVATION Excavation in trench for rock (Provisional)	m ³	1.00		-
	Concrete stools and thrust blocks		1.00		
L78	Provide and place mass concrete (1:3:6) for anchor blocks in bends etc Rate to include excavation and necessary formwork (provisional)	m ³	1.00		-
K6	CROSSINGS				
K672	Sewer, ditch or drain crossing, pipe bore 300 - 900 mm	nr	1.00		-
K682	Other underground services, pipe bore 300 - 900 mm	nr	2.00		-
1/=					
K7	REINSTATEMENT				
K732	Breaking up, temporary and permanent reinstatement of dirt roads, pipe nom. bore 300 - 900mm (Provisional)	m	15.00		-
					· · · · · · · · · · · · · · · · · · ·
	DAGE 2 TOTAL CARRIED TO BILL 2 2 4 COLECTION DAGE				-
	PAGE 3 TOTAL CARRIED TO BILL 2.3.1 COLECTION PAGE				-

ITEM	BILL No. 2.3.1 RAW WATER GRAVITY I DESCRIPTION UNIT		QTY	RATE	AMOUNT (KShs
			-	(KShs)	7
	BILL 2.3.1 COLLECTION				
	From page 1				-
	From page 2				-
	From page 3				-

	BILL 2.3 WATER DISTRIBUTION P 2.3.2 TREATED WATER RISING					
	2.3.2 TREATED WATER RISING	IVIAIING	,			
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)	
	CLASS I: PIPEWORK - PIPES					
	Supply and Transport to site. Transport from site store, lay and joint pipes in trench, include for excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation and backfilling. Note:- Trench width and minimum cover to pipes is as per the Specifications. The cost shall include for strutting, shuttering, stabilizing the earth faces of					
	trenches and keeping the trenches free of water from whatever source by pumping or other means and cost of use of selected soil from the excavated material for compaction in bed and surround to backfilling of trenches, all as specified.					
	0/ 0/050					
	GI PIPES Supply, deliver and instal the following GI pipes double flanged as directed by the engineer,the price should include anchorage, Connection details and associated fittings					
1433	Dia 250 mm PN 16 for river and road crossings,	m	10		-	
	CLASS J: PIPEWORK - FITTINGS AND VALVES					
	All Fittings to PN 16. Butt fusion fittings for DN 110 and above while Compression fittings for DN90 and below. Rate to include for all Steel-HDPE connection fittings where applicable.					
	Valves and Washouts					
	Supply, handle, deliver to site, fix in place and test inclusive of all fittings, including flanged tees,saddle clamp, nipples and steel fittings,steel pipes inclusive (rate to exclude construction of chambers).					
J861.1	DN100mm Vent-O-Matt RBX series or similar approved flanged double orifice air release and vacuum break valve	No	1		-	
J863.1	DN100mm diameter socket to spigot piece with thrust flange, 900mm long-WO	No.	1		-	
J863.2	DN100mm diameter double spigot piece, 15000mm long-WO	No.	1		-	
J863.3	DN100mm diameter double flanged riser piece, 2000mm long- Cut to suit-AV	No.	1		-	
	BENDS Supply, handle, deliver to site, fix in place and test inclusive of all fittings bends as directed by the Engineer. For:					
	Bends 90 ⁰					
J612.1	Dia 250 mm	No	3		-	
	Bends 45° Dia 250 mm	No.	2		-	
J381.7	Water Meters Ditto but DN250mm-Woltmann zonal bulk water meters	No	1		-	
J651.1	Adaptors DN 250 VJ Couplings	No.	1		-	
	CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES					
	Chambers			+		
	PAGE 1 TOTAL CARRIED TO BILL 2.3.2 COLECTION PAGE				-	

				I	T
	2.3.2 TREATED WATER RISING MAINS	1			
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Supply and deliver materials on site, excavate for a construct complete chambers including precast concrete cover slabs			(110110)	(110110)
	where necessary as shown on the drawing				
	Provide all materials and construct WASHOUT chambers				
	internal dimensions 1400mm x 1400mm. Include for supply				
	and fixing of lockable concrete cover and step irons, as detailed in drawing				
K231	Depth: not exceeding 1 m	No	1		_
	Provide all materials and construct AIR VALVE chambers internal dimensions 1400mm x 1400mm. Include for supply and fixing of lockable concrete cover and step irons, as detailed in drawing				
K234	Depth: not exceeding 3 m	No	1		_
T(ZO+	Bopan. Hot oxecoding o III	110			
	Provide all materials and construct CONTROL VALVE				
	chambers internal dimensions 1000mm x 1000mm. Include				
	for supply and fixing of lockable cover and step irons, as detailed in drawing				
	detailed in drawing				
K232	Depth: not exceeding 3 m	No	1		-
	04 8: 4 4 24 :				
	Other Pipework Ancillaries Pipe markers shall be made from reinforced precast concrete				
	to detail. This item shall be deemed to include supply and				
	fixing the pipe markers and painting as directed by the				
	engineer.				
K820.1	Pipeline marker post	nr	6		-
K820.2	Air valve marker post	nr	2		_
11020.2	7 iii Vaive marker poet				
K820.3	Washout marker post	nr	1		-
K820.4	Sluice Valve marker post	nr	1		-
	CLASS L: PIPEWORK – SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION				
L111	Excavation in trench for rock (Provisional)	m ³	330		_
	Concrete stools and thrust blocks				
L78	Provide and place mass concrete (1:3:6) for anchor blocks in bends etc Rate to include excavation and necessary formwork (provisional)	m ³	1		_
	7				
K6	CROSSINGS				
K612	River, stream or canal, width 1-3m, pipe bore not exc. 300mm	nr	1		-
K642	Hedge crossing, pipe bore not exceeding 300mm	nr	2		-
K672	Sewer, ditch or drain crossing, pipe bore 300 - 900 mm	nr	3		
K682	Other underground services, pipe bore 300 - 900 mm	nr	3		-
K7	REINSTATEMENT	-			
K732	Breaking up, temporary and permanent reinstatement of dirt roads, pipe nom. Bore 300-900mm (Provisional)	m	50		-
	(
	PAGE 2 TOTAL CARRIED TO BILL 2.3.2 COLECTION				
	PAGE				1 -

	2.3.2 TREATED WATER RISING MAINS	1			
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.3.2 COLLECTION				
	From page 1				-
	From page 2				-
	BILL 2.3.2 COLLECTION CARRIED TO BILL 2 SUMMARY				-

BILL No. 2.3.3 WATER DISTRIBUTION LINES								
	BILL 2.3.3.1 MATUU TRANSMI	SSION I I	NES					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
	CLASS A: GENERAL ITEMS							
	Specified Requirements							
	<u>Testing of works</u>							
	Carry out pressure testing, cleansing and sterilising of the pipeline in accordance with clauses 440 and 441 of the							
	specification.							
1000 1	71.		00.500.00					
A260.1	Pipe bore n.e 400mm	m	20,560.00		-			
	CLASS D:DEMOLITION AND SITE CLEARANCE							
	clearance shall include demolition and removal of natural and							
	artificial articles, objects and obstructions which are above the							
	original surface. Items for demolition and site clearance shall be							
	deemed to include disposal of materials arising. Items for							
	general clearance include removal of hedges and removal of							
	hedges stumps of any diameter and disposal of materials arising of. Items for removal of trees shall include removal of stumps							
	where required. The girth shall be measured 1m above the							
	ground level. (provisional)							
D210	General clearance for pipeline route of all shrubs. Clearance	ha	0.41		-			
D040	width not exceeding 2m.		4.00					
D210	Trees of girth 500mm - 1m	nr	4.00		-			
D3	DEMOLITION OF BUILDINGS							
	REMOVED FROM SITE & DISPOSED AS DIRECTED							
D331	Masonry construction, volume not exc. 50 m³ (Provisional)	nr	6.00					
	CLASS I: PIPEWORK - PIPES							
	Supply and Transport to site. Transport from site store, lay and joint pipes in trench, include for excavation, preparation of							
	surfaces, disposal of excavated material, shoring sides of							
	excavation and backfilling. Note:- Trench width and minimum							
	cover to pipes is as per the Specifications. The cost shall include							
	for strutting, shuttering, stabilizing the earth faces of trenches							
	and keeping the trenches free of water from whatever source by							
	pumping or other means and cost of use of selected soil from the excavated material for compaction in bed and surround to							
	backfilling of trenches, all as specified.							
17	Approved High Density Polyethylene Pipes (HDPE)							
173.1	Nominal Bore DN 315 , PN 16 in Trenches							
1732.1	Depth n.e 1.5 m	m	9,200.00		-			
1733.1	Depth 1.5-2 m	m	1,000.00					
	·							
1734.1	Depth 2-2.5 m	m	100.00		-			
172	Nominal Bore DN 280, PN 16 in Trenches							
1722	Depth n.e 1.5 m	m	9,200.00		-			
1723	Depth 1.5-2 m	m	500.00					
1123	Deptil 1.0=2 III	m	300.00		-			
1724	Depth 2-2.5 m	m	160.00		-			
172	Nominal Bore DN 250, PN 16 in Trenches							
1722	Depth n.e 1.5 m	m	3,500.00		-			
	PAGE 1 TOTAL CARRIED TO BILL 2.3.3.1 COLECTION PAGE				-			

	BILL No. 2.3.3 WATER DISTRII	RUTION L	INES		
	BILL 2.3.3.1 MATUU TRANSMISSION LINES				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	GI PIPES				
	Supply, deliver and instal the following GI pipes double flanged as directed by the engineer,the price should include anchorage, Connection details and associated fittings				
I421	Dia 250 mm PN 16 for river and road crossings,	m	200.00		-
1423	Ditto: for DN 280	m	100.00		-
1433	Ditto: for DN 315	m	100.00		-
	CLASS J: PIPEWORK - FITTINGS AND VALVES				
	All Fittings to PN 16. Butt fusion fittings for DN 110 and above while Compression fittings for DN90 and below. Rate to include for all Steel-HDPE connection fittings where applicable.				
	Air Valves, Fire Hydrants and Washouts				
	Supply, handle, deliver to site, fix in place and test inclusive of all fittings, including flanged tees,saddle clamp, nipples and steel fittings,steel pipes inclusive (rate to exclude construction of chambers).				
J861.1	DN100mm Vent-O-Matt RBX series or similar approved flanged double orifice air release and vacuum break valve	No	11.00		-
J863.1	DN100mm diameter socket to spigot piece with thrust flange, 900mm long - WO	No.	8.00		-
J863.2	DN100mm diameter double spigot piece, 15000mm long -WO	No.	5.00		-
J863.3	DN100mm diameter double flanged riser piece, 2000mm long- Cut to suit-AV	No.	11.00		-
J862.4	Fire Hydrants to BS 750 Type 2	No.	6.00		-
	Supply, handle, deliver to site, fix in place inclusive of all jointing fittings/accessories and test Sluice valve and gate valve to Tees				
J811.4	Ditto for DN 315 ,PN 16	No	1.00		-
J811.5	Ditto for DN 280 ,PN 16	No	1.00		-
J811.6	Ditto for DN 250 ,PN 16	No	2.00		-
	Dictor of Division in the	- 110	2.00		
			-		
	PAGE 2 TOTAL CARRIED TO BILL 2.3.3.1 COLECTION PAGE				

	BILL No. 2.3.3 WATER DISTRIE	BUTION L	INES		
	BILL 2.3.3.1 MATUU TRANSMISSION LINES				
	BILL 2.3.3.1 MATOU TRANSMISSION LINES				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BENDS				
	Supply, handle, deliver to site, fix in place and test inclusive of all fittings bends as directed by the Engineer. For:				
	Bends 90 ⁰				
10101					
J613.1	DN 315 mm	No	2.00		-
J613.2	Dia 250 mm	No	3.00		-
	REDUCERS				
J681	Supply, handling, fixing in place and testing inclusive of all fittings For reducers				
J681.1	DN 315 x 280	No	1.00		_
J681.2	DN 280 x 250	No	1.00		-
	Water Meters				
J381.6	Supply and install a DN 315mm dia master meter approved by the Engineer. Rate to include all jointing materials.	No.	1.00		-
J381.7	Ditto but DN250mm-Woltmann zonal bulk water meters	No	1.00		-
J381.8 J381.9	Ditto but DN150mm-Woltmann zonal bulk water meters Ditto but DN110mm-Woltmann zonal bulk water meters CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES	No No	1.00		-
	Chambers				
	Supply and deliver materials on site, excavate for a construct complete chambers including precast concrete cover slabs where necessary as shown on the drawing				
	Provide all materials and construct WASHOUT chambers internal dimensions 1400mm x 1400mm. Include for supply and fixing of lockable concrete cover and step irons, as detailed in drawing				
K231	Depth: not exceeding 1 m	No	13.00		-
	Provide all materials and construct CONTROL VALVE chambers internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing				
K232	Depth: not exceeding 3 m	No	4.00		-
	Provide all materials and construct AIR VALVE chambers internal dimensions 1400mm x 1400mm. Include for supply and fixing of lockable concrete cover and step irons, as detailed in drawing				
K234	Depth: not exceeding 3 m	No	11.00		-
K235	Ditto as 2.73 but for Fire hydrants type 2 to BS 750 as on drawing	No	6.00		_
	a.c.m.g				-
	PAGE 3 TOTAL CARRIED TO BILL 2.3.3.1 COLECTION PAGE				_

	BILL No. 2.3.3 WATER DISTRIE	RUTION I	INFS		
	BILL 2.3.3.1 MATUU TRANSMISSION LINES	JOHON L	IIVES		
	BILL 2.3.3.1 WATOU TRANSMISSION LINES				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Micro-tunnelling below bituminous road				
	Rates quoted shall be deemed to include for costs incurred on traffic control, signage and safety measures during execution of the works.Including all costs of protection				
K692	Micro-tunnelling below the bituminous road. Nominal bores n.e 50-400 mm	m	100.00		-
	Other Pipework Ancillaries Pipe markers shall be made from reinforced precast concrete to detail. This item shall be deemed to include supply and fixing the pipe markers and painting as directed by the engineer.				
K820.1	Pipeline marker post	nr	102.80		-
K820.2	Air valve marker post	nr	11.00		-
K820.3	Washout marker post	nr	13.00		-
K820.4	Sluice Valve marker post	nr	4.00		-
K6	CROSSINGS				
K612	River, stream or canal, width 1-3m, pipe bore 300-900 mm	nr	5.00		-
K622	River, stream or canal, width 3-10m, pipe bore 300-900 mm	nr	5.00		-
K7	REINSTATEMENT				
K732	Breaking up, temporary and permanent reinstatement of dirt roads, pipe nom. Bore 300-900mm (Provisional)	m			-
	CLASS L: PIPEWORK – SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION				
L111	Excavation in trench for rock (Provisional) Concrete stools and thrust blocks	m ³	10.00		-
	Surround with class C15/20 mass concrete, pipe bore n.e 400mm for road, river and stream crossings and in rocky sections with inadequate cover	m3	12.00		-
	Bedding Material				
L321	In pipe trenches bedding in rocky areas with selected imported class S2 material. Pipe n.b. n.e. 300 mm (Provisional)	m ³	12.00		
L78	Provide and place mass concrete (1:3:6) for anchor blocks in bends etc Rate to include excavation and necessary formwork (provisional)	m ³	12.00		-
				+	
	PAGE 4 TOTAL CARRIED TO BILL 2.3.3.1 COLECTION PAGE				-

	BILL No. 2.3.3 WATER DISTRI	BUTION I	INES		
	BILL 2.3.3.1 MATUU TRANSMISSION LINES				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.3.3.1 COLLECTION				
	From page 1				-
	From page 2				-
	From page 3				-
	From page 4				-
	BILL 2.3.3.1 COLLECTION CARRIED TO BILL 2.3.3 SUMM	MARY			-

	DILL NA 222 WATER DISTRIC	י ארודוראי	INES		
	BILL No. 2.3.3 WATER DISTRII	DUTION	INES		
	2.33.2 KITHIMANI-NDALANI-SOFIA DISTRIBUTION				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	CLASS A: GENERAL ITEMS			(IXOIIS)	
	Specified Requirements				
	Testing of works				
	Carry out pressure testing, cleansing and sterilising of the pipeline in accordance with clauses 440 and 441 of the specification.				
A260.1	Pipe bore n.e 160 mm	m	30,000.00		_
7.200	CLASS D:DEMOLITION AND SITE CLEARANCE		00,000.00		
	clearance shall include demolition and removal of natural and				
	artificial articles, objects and obstructions which are above the original surface. Items for demolition and site clearance shall be deemed to include disposal of materials arising. Items for general clearance include removal of hedges and removal of hedges stumps of any diameter and disposal of materials arising of. Items for removal of trees shall include removal of stumps where required. The girth shall be measured 1m above the ground level. (provisional)				
D210	General clearance for pipeline route of all shrubs. Clearance width not exceeding 2m.	ha	0.20		-
D210	Trees of girth 500mm - 1m	nr	2.00		-
	CLASS I: PIPEWORK - PIPES				
	Supply and Transport to site. Transport from site store, lay and joint pipes in trench, include for excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation and backfilling. Note:- Trench width and minimum cover to pipes is as per the Specifications. The cost shall include for strutting, shuttering, stabilizing the earth faces of trenches and keeping the trenches free of water from whatever source by pumping or other means and cost of use of selected soil from the excavated material for compaction in bed and surround to backfilling of trenches, all as specified.				
17	Approved High Density Polyethylene Pipes (HDPE)				
171	Nominal Bore DN 125 , PN 12.5 in Trenches				
1712	Depth n.e 1.5 m	m	1,300.00		
171.1	Nominal Bore DN 90 , PN 12.5 in Trenches				
1712.1	Depth n.e 1.5 m	m	4,950.00		-
l71.2	Nominal Bore DN 63, PN 12.5 in Trenches			-	
1712.1	Depth n.e 1.5 m	m	2,900.00		-
	GI PIPES Supply, deliver and instal the following GI pipes double flanged as directed by the engineer,the price should include anchorage, Connection details and associated fittings				
I421	Dia 125 mm PN 16 for river and road crossings, PAGE 6 TOTAL CARRIED TO BILL 2.3.3.2 COLECTION PAGE	m	100.00		-

			INES		
	2.33.2 KITHIMANI-NDALANI-SOFIA DISTRIBUTION				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
L111	Excavation in trench for rock (Provisional)	m ³	1,000.00		-
	CLASS J: PIPEWORK - FITTINGS AND VALVES				
	All Fittings to PN 16. Butt fusion fittings for DN 110 and above while Compression fittings for DN90 and below. Rate to include for all Steel-HDPE connection fittings where applicable.				
	Air Valves, Fire Hydrants and Washouts				
	Supply, handle, deliver to site, fix in place and test inclusive of all fittings, including flanged tees,saddle clamp, nipples and steel fittings,steel pipes inclusive (rate to exclude construction of chambers).				
J861.1	Single small-orifice Air Valve on DN 125 mm pipe	No	37.00		-
J863.1	Washout Valve (50mm opening) on DN125 mm pipe	No.	41.00		-
	Supply, handle, deliver to site, fix in place inclusive of all jointing fittings/accessories and test Sluice valve and gate valve to Tees				
	Flanged Sluice Valves to BS 5163 type "Glenfield/avk " PN12.5 or approved equivalent				
J811.5	Ditto for DN 12, PN 12.5	No	2.00		-
J811.6	Ditto for DN 90, PN 12.5	No	6.00		-
J811.7	Ditto for DN 63, PN 12.5	No	10.00		-
	Tees				
	Supply, handle, deliver to site, fix in place and test inclusive of all fittings bends as directed by the Engineer. For:				
J613.1	DN 280-125 Tee	No	1.00		-
J613.2	DN 125-90 Tee	No	5.00		-
J612.1	DN 90-63 Tee	No	5.00		-
	Reducers				
	Supply and install HDPE reducers as directed by the Engineer.				
J613.1	DN 125mm x 90mm, PN 12.5	No	2.00		_
J613.2	DN 90mm x 63mm, PN 12.5	No	2.00		-
	Bends 90 ⁰				
J611.1	DN 125 mm	No	1.00		-
105:	Adaptors				
J651.1	DN 90 mm VJ Couplings	No.	2.00		-
	End Caps				
	Supply and install HDPE end caps as directed by the Engineer. End caps above DN 100mm shall be butt fussion fittings while below DN 100mm shall be compression fittings.				
J613.1	DN 125mm end caps, PN 12.5	No	4.00		-
J613.2	DN 90mm end caps, PN 12.5	No	5.00		-
J612.1	DN 63mm Tee caps, PN 12.5	No	7.00		-
J381.6	Water Meters Supply and install a DN 110 mm dia master meter approved by the Engineer. Rate to include all jointing materials.	No.	2.00		-

	BILL No. 2.3.3 WATER DISTRIBUTION LINES							
	SIZE NO. ZION WATER DIOTRI							
	2.33.2 KITHIMANI-NDALANI-SOFIA DISTRIBUTION							
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
	CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES							
	Chambers							
	Supply and deliver materials on site, excavate for a construct complete chambers including precast concrete cover slabs where necessary as shown on the drawing							
	Provide all materials and construct chambers internal dimensions 1000mm x 1000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing							
K232	Depth: not exceeding 3 m	No	78.00		-			
	Other Pipework Ancillaries							
	Pipe markers shall be made from reinforced precast concrete to detail. This item shall be deemed to include supply and fixing the pipe markers and painting as directed by the engineer.							
8K820.1	Pipeline marker post	nr	150.00		-			
8K820.2	Air valve marker post	nr	37.00		-			
8K820.3	Washout marker post	nr	41.00		-			
8K820.4	Sluice Valve marker post	nr	15.00		-			
K6	CROSSINGS							
K612	River, stream or canal, width 1-3m, pipe bore 300-900 mm	nr	5.00		-			
K622 K642	River, stream or canal, width 3-10m, pipe bore 300-900 mm Hedge crossing, pipe bore 300-900 mm	nr	2.00 10.00		-			
K652	Wall crossing, pipe bore 300-900 mm	nr nr	10.00					
K662	Fence Crossing, pipe bore 300-900 mm	nr	10.00		_			
K672	Sewer, ditch or drain crossing, pipe bore 300-900 mm	nr	10.00		-			
K682	Other underground services, pipe bore 300-900 mm	nr	50.00		-			
K7	REINSTATEMENT							
K732	Breaking up, temporary and permanent reinstatement of dirt roads, pipe nom. Bore 300-900mm (Provisional)	m	300.00		-			
·			·					
			<u> </u>					
	PAGE 8 TOTAL CARRIED TO BILL 2.3.3.2 COLECTION PAGE				-			

	BILL No. 2.3.3 WATER DISTRIBUTION LINES							
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
	BILL 2.3.3.2 COLLECTION							
	From page 6				-			
	From page 7				-			
	From page 8				-			
	BILL 2.3.3.2 COLLECTION CARRIED TO BILL 2.3.3 SUMM	ARY			-			
		- 411						

	BILL No. 2.3.3 WATER DIST	RIBUTION L	INES		
	BILL 2.3.3 PIPELINE SUMMARY				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL COLLECTION				
	From Bill 2.3.3.1				-
	From Bill 2.3.3.2				-
	BILL 2.3.3 COLLECTION CARRIED TO BILL 2 SUMMARY	-			-

BILL 2.4.1- 225m3 REINFORCED CONCRETE WATER		BILL NO. 2.4 V	VATER	STORAGE TAN	KS	
ITEM NO. E EARTHWORKS E3 EXCAVATION FOR FOR FOUNDATIONS E325.1 In class il material max. depth 2 - 5 m for re-use m3 20.23 In class il material max. depth 2 - 5 m for disposal max. depth		<u>5.22 ((6) 21) (</u>	l l	01010102 1741	<u> </u>	
NO. E EARTHWORKS E3 EXCAVATION FOR FOR FOUNDATIONS E325.1 In class II material max. depth 2 - 5 m for re-use m3 20.23 In class II material max. depth 2 - 5 m for gas m3 30.34 E335.2 In class III material max. depth 2 - 5 m for m3 30.34 E345.2 In class III material max. depth 2 - 5 m for m3 50.57 E6 FILLING AND COMPACTION E6112 300 mm Thick hardcore fill. m3 25.00 50mm stone dust bilinding m3 5.00 F IN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 F 7 IN-SITU CONCRETE STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 20 F333 20 mm aggregate to 75 mm thick blinding layer. m3 75.00 G CONCRETE AND CLASS B CONCRETE AND CONCRETE FOR STRUCTURAL CONCRETE FOR STRUCTURAL CONCRETE FOR STRUCTURAL CONCRETE FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 FT STRUCTURE STRUCTURAL CONCRETE AND CONCRE	BILL	2.4.1- 225m3 REINFORCED CONCRETE WATE	R_			
NO. E EARTHWORKS E3 EXCAVATION FOR FOR FOUNDATIONS E325.1 In class II material max. depth 2 - 5 m for re-use m3 20.23 In class II material max. depth 2 - 5 m for gas m3 30.34 E335.2 In class III material max. depth 2 - 5 m for m3 30.34 E345.2 In class III material max. depth 2 - 5 m for m3 50.57 E6 FILLING AND COMPACTION E6112 300 mm Thick hardcore fill. m3 25.00 50mm stone dust bilinding m3 5.00 F IN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 F 7 IN-SITU CONCRETE STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 20 F333 20 mm aggregate to 75 mm thick blinding layer. m3 75.00 G CONCRETE AND CLASS B CONCRETE AND CONCRETE FOR STRUCTURAL CONCRETE FOR STRUCTURAL CONCRETE FOR STRUCTURAL CONCRETE FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 FT STRUCTURE STRUCTURAL CONCRETE AND CONCRE						
E EARTHWORKS E3 EXCAVATION FOR FOR FOUNDATIONS E325.1 In class I material max. depth 2 - 5 m for re-use m3 20.23 In class II material max. depth 2 - 5 m for disposal m3 30.34 In class II material max. depth 2 - 5 m for m3 30.34 In class II material max. depth 2 - 5 m for m3 50.57 E6 FILLING AND COMPACTION m3 50.57 E6 FILLING AND COMPACTION m3 50.00 F IN-SITU CONCRETE m3 5.00 F IN-SITU CONCRETE m5 5.00 DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT M5 6.00 Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 F7 SOND SOND SOND SOND SOND SOND SOND SOND		DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
E325.1 In class II material max. depth 2 - 5 m for re-use m3 20.23 In class II material max. depth 2 - 5 m for re-use m3 30.34 In class II material max. depth 2 - 5 m for m3 30.34 In class III material max. depth 2 - 5 m for m3 30.34 In class III material max. depth 2 - 5 m for m3 50.57 E345.2 disposal m3 50.57 E6 FILLING AND COMPACTION E6112 300 mm Thick hardcore fill. m3 25.00 50mm stone dust blinding m3 5.00 F IN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING OR ORNETE FOR CLASS B EXPOSURE USING ORNETY FOR TALAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 Frovide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Fornwork, Rough Finish: Plane Vertical. External sides of base slab and not, with 40.2 and bottom side of roof slab, vertical external was and internal roof supports m6 finish planed external was and internal roof supports m6 finish planed external was and internal roof supports m8 finish planed external was and internal roof supports m9 289.63 G REINFORCEMENT M9 (63.80 G524 Diameter: 10mm kg 1,109.80 G652 Diameter: 12mm kg 6,117.70 G652 Diameter: 12mm kg 54.00 G68 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00		EARTHWORKS				
E325.1 In class I material max. depth 2 - 5 m for re-use m3 20.23 In class II material max. depth 2 - 5 m for disposal m3 30.34 E335.2 disposal m3 30.34 E345.2 In class III material max. depth 2 - 5 m for disposal m3 50.57 E6 FILLING AND COMPACTION E6112 300 mm Thick hardcore fill. m3 25.00 50mm stone dust blinding m3 5.00 F IN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORNARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Fornwork, Rough Finish: Plane Vertical. External sides of base slab and nord, width <0.2 and bottom side of roof slab, vertical external was and internal roof supports GF REINFORGEMENT GF REINFOR						
In class II material max. depth 2 - 5 m for disposal	E3	EXCAVATION FOR FOR FOUNDATIONS				
E335.2 disposal m3 30.34 E345.2 lin class III material max. depth 2 - 5 m for disposal m3 50.57 E6 FILLING AND COMPACTION E6112 300 mm Thick hardcore fill. m3 25.00 S0mm stone dust blinding m3 5.00 F IN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING FOR STRUCTURAL CONCRETE F	E325.1	In class I material max. depth 2 - 5 m for re-use	m3	20.23		-
E345.2 disposal m3 50.57 E6 FILLING AND COMPACTION E6112 300 mm Thick hardcore fill. m3 25.00 50mm stone dust blinding m3 5.00 F IN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING GRIDNARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork, Rough Finish; Plane Vertical. External sides of base slab and roof, width <0.2 and bottom side of roof slab, vertical external distance of the side of the sid	E335.2		m3	30.34		-
E6112 300 mm Thick hardcore fill. m3 25.00 50mm stone dust blinding m3 5.00 F IN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports G S REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G64 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	E345.2		m3	50.57		-
FIN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports G S REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G64 JOINTS Construction joint between tank bottom and walls with a 200mm wider rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	E6	FILLING AND COMPACTION				
FIN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING F3 ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external G142 walls and internal roof supports G S REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G64 JOINTS Construction joint between tank bottom and walls with a 200mm wider rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES						
F IN-SITU CONCRETE DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork: Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G624 Diameter: 10mm kg 54.00 G65 JOINTS Construction joint between tank bottom and walls with a 200mm wider rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G86 CONCRETE ACCESSORIES	E6112	300 mm Thick hardcore fill.	m3	25.00		-
DESIGNED MIX FOR STRUCTURAL CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323		50mm stone dust blinding	m3	5.00		-
CONCRETE FOR CLASS B EXPOSURE USING ORDINARY PORTLAND CEMENT Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports m² 289.63 G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G64 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	F	IN-SITU CONCRETE				
Provide and place Concrete Grade: 15 F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports m² 289.63 G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G524 Diameter: 10mm kg 1,109.80 G525 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00		CONCRETE FOR CLASS B EXPOSURE USING				
F323 20 mm aggregate to 75 mm thick blinding layer. m3 6.00 Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	F3	ORDINARY PORTLAND CEMENT				
Provide Concrete Grade: 20 F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports G142 walls and internal roof supports High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00		Provide and place Concrete Grade: 15				
F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Fornwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports m² 289.63 G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00	F323	20 mm aggregate to 75 mm thick blinding layer.	m3	6.00		-
F333 20mm aggregates m3 75.00 G CONCRETE ANCILLARIES Dimensions as per details on drawings. Fornwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports m² 289.63 G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00		Provide Concrete Grade: 20				
G CONCRETE ANCILLARIES Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	F333		m3	75.00		-
Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external G142 walls and internal roof supports m² 289.63 G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES		33 3				
Dimensions as per details on drawings. Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external G142 walls and internal roof supports m² 289.63 G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES						
Formwork; Rough Finish; Plane Vertical. External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external G142 walls and internal roof supports m² 289.63 G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	G					
External sides of base slab and roof; width <0.2 and bottom side of roof slab, vertical external walls and internal roof supports G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES						
and bottom side of roof slab, vertical external walls and internal roof supports G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES						
G5 REINFORCEMENT High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES		and bottom side of roof slab, vertical external				
High yield steel bars to SSRN 126 or 127 G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES			m²	289.63		-
G522 Diameter: 8mm kg 63.80 G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	G5	High yield steel here to SSBN 436 or 437				
G523 Diameter: 10mm kg 1,109.80 G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	C522		ka	63 80		
G524 Diameter: 12mm kg 6,117.70 G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	GUZZ	Dianiclei. Onini	ĸg	03.00		-
G525 Diameter: 16mm kg 54.00 G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	G523	Diameter: 10mm	kg	1,109.80		-
G6 JOINTS Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	G524	Diameter: 12mm	kg	6,117.70		-
Construction joint between tank bottom and walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	G525	Diameter: 16mm	kg	54.00		-
walls with a 200mm wide rubber water stops in the centre of the concrete G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES	G6					
G641 Width or depth: not exceeding 0.5 m. m2 3.00 G8 CONCRETE ACCESSORIES		walls with a 200mm wide rubber water stops in				
	G641		m2	3.00		-
Finishing of top surfaces	G8					
				-		
G812 Steel towel finish m2 200.00	G812	Steel towel finish	m2	200.00		-
PAGE 1 TOTAL CARRIED TO BILL 2.4.1 COLLECTION PAGE	PAGE 1	TOTAL CARRIED TO BILL 2.4.1 COLLECTION F	PAGE			<u> </u>
				_		

	BILL NO. 2.4 W	ATER	STORAGE TAN	KS	
BILL ITEM	2.4.1- 225m3 REINFORCED CONCRETE WATER DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
NO.	DESCRIPTION	UNII	QIT	RATE (NOTS)	AMOUNT (KSIIS)
110.	PIPE & PIPE FITTINGS - SUPPLY AND				
I	INSTALL				
	Drain upvc pipes				
I162.4h	Class C 90mm dia	m			
l162.4h	Class C 300mm dia	m	20.00		-
10					
13	Fittings to welded steel pipes				
	Welded steel pipes to SSRN 216 externally				
	and internally fusion bonded epoxy to SSRN				
	214 PN 16				
	Bends				
	100mm diameter double flanged long radius 90				
1314.4	degrees bends	nr	2.00		-
Bill 4-	80mm diameter double flanged long radius 90				
I318.4e	degrees bends	nr	2.00		-
	150mm diameter double flanged long radius 90		0.00		
	degrees bends	nr	2.00		-
	Tappers 100*80mm diameter double flanged concentric				
1352.4	taper	nr	2.00		_
1002.1	Adaptors and couplings		2.00		
1385.4	50mm diameter double adaptor and couplings	nr	15.00		-
I385.4a	80mm diameter double adaptor and couplings	nr	5.00		-
1385.4b	100mm diameter double adaptor and couplings	nr	1.00		-
1385.4b	125mm diameter double adaptor and couplings	nr	1.00		-
	Pipe pieces with bellmouths				
	50mm plain ended pipe C/W central puddle				
1371.4	flange length 1m	nr	3.00		-
1074 4-	80mm plain ended pipe C/W central puddle		0.00		
1371.4a	flange length 1m 50mm single flanged spigot pipe length 2.5m(cut	nr	3.00		-
1375.4	to suit)	nr	3.00		_
107 0.4	80mm single flanged spigot pipe length 2.5m(cut	- 111	3.00		-
1376.4	to suit)	nr	3.00		_
	,				
1376.4a	50mm double flanged spigot pipe length 1.5m	nr	5.00		-
1070 4-	FOrms double flower desired viscolar with A Free		0.00		
1376.4a	50mm double flanged spigot pipe length 1.5m	nr	2.00		-
1379.4	80mm diameter flanged bellmouth	nr	3.00		-
	•				
J371	100mm diameter single flanged bellmouth	nr	9.00		<u> </u>
19	Valves, penstocks, hydrants, meters				
I911.4	50mm dia. Double flanged gate valve	nr	4.00		-
	50mm dia Elanged hall valva Bi water series				
1983.4	50mm dia. Flanged ball valve, Bi water series 1048 or approved equivalent	nr	4.00		_
1000.4	approved equivalent	1.11	7.00		
			·		
DAGEG	TOTAL CARRIED TO BULL 0.4.4 COLLECTIONS	ACE			
PAGE 2	TOTAL CARRIED TO BILL 2.4.1 COLLECTION P	AGE			-

	BILL NO. 2.4 W	/ATER	STORAGE TAN	NKS	
BILL	2.4.1- 225m3 REINFORCED CONCRETE WATER				
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
1991.4a	80mm dia woltman bulk water meter	nr	1.00		-
I991.4a	100mm dia woltman bulk water meter	nr	1.00		-
I991.6b	100mm double flanged gate valve	nr			
I991.6c	125mm double flanged gate valve	nr	1.00		-
I991.6d	150mm double flanged gate valve	nr	1.00		-
I991.6d	200mm double flanged gate valve	nr	1.00		-
J	PIPE WORK				
	PIPES AND FITTINGS INSTALL				
J381.1	100mm single flanged pipe L = 3500	nr			
J381.2	100mm double flanged pipe L= 1800	nr	1.00		-
J381.3	100mm single flanged pipe with puddle flange L = 800	nr	1.00		-
J381.3	150mm single flanged pipe with puddle flange L = 800	nr	1.00		-
J381.3	150mm single flanged pipe with puddle flange L = 1100	nr	1.00		-
J381.4	100mm double flanged pipe L= 1100	nr	1.00		-
J381.5	100mm plain ended pipe L= 1500	nr	1.00		-
J381.6	100mm double flanged pipe L= 4500	nr	1.00		-
J381.6	150mm double flanged pipe L= 4500	nr	1.00		-
J381.7	80mm single flanged pipe, L = 3500	nr	1.00		-
J381.8	80mm double flanged pipe with puddle flange L=	nr	1.00		-
J381.9	80mm single flanged pipe L = 1600	nr	1.00		-
J811	80mm dia. Double flanged gate valve	nr	1.00		-
К	PIPEWORK- MANHOLES AND PIPEWORK ANCILLARIES				
K131.23	Gate valve chamber, size 1500*1000mm internal dimensions depth as shown	nr	2.00		-
	Bulk water meter chamber, size 1500*1000mm internal dimensions depth as shown	nr	1.00		-
K136.23	Overflow/washout chamber size 1500*1000mm internal dimensions depth n.e 3.0m	nr	1.00		-
L	PIPEWORK- SUPPORTS AND PROTECTION ANCILLARIES TO LAYING AND EXCAVATION				
L112	Extras to excavate and backfilling in pipe trenches, excavation of class II material	m3	33.23		-
PAGE 3	TOTAL CARRIED TO BILL 2.4.1 COLLECTION F	PAGE			<u> </u>

	BILL NO. 2.4 W	ATER S	STORAGE TANK	KS	
BILL	2.4.1- 225m3 REINFORCED CONCRETE WATER	₹			
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Concrete class 15/20 in stools and thrust				
. =	blocks				
L713.1	Nominal bore n.e 20mm, volume 0.2-0.5m3	nr	5.00		-
N	MISCELLENEOUS METAL WORK Rate to include supply and fixing and inclusive of foundations where applicable				
	Galvanized mild steel exernal ladders with				
N231.1	stringers returned to form handrails	m	4.00		-
N231.2	Galvanized mild steel internal ladders with stringers returned to form handrails	m	3.00		-
	Leakable mild steel shoot metal severa for				
N9.1	Lockable mild steel sheet metal covers for access manholes as per details on drg	nr	5.00		-
N9.2	Step irons	nr	20.00		-
U	BRICKWORK , BLOCKWORK AND MASONRY dense concrete blockwork				
U512.1	150*225mm composite construction in vertical curved walls	m2	20.00		-
U512.2	150*300mm composite construction in vertical curved walls	m2	20.00		-
U522	225*225mm composite contruction in vertical curved walls	m2	20.00		-
U491	Blockwork ancillaries Joint reinforcement using 100mm thick 1.2 cement sand mortar with 100mm dia bars at centre in every course	m	100.00		-
	DAINITING				
V	PAINTING Bituminous paint on masonry to grove formed				
	from cement sand mortar at the bottom of the wall	m2	100.00		_
W	WATER PROOFING				
W1	Damp proofing				
W154	Using rendering in ordinary cement mortar of surved surfaces less than 10m radius	m2	112.16		
					
Х	MISCELLENIOUS WORK				
X9.1	Provide and fix vent pipes	nr	3.00		-
X1	FENCES				
	Concrete post and Chainlink (Gauge 12.5g, mesh size 80mm x80mm, height 8feet, spacing at 3m)				
X136	Height: 2.50 - 3.00 m	m	100.00		-
	GATES AND STILES		1.55		
	Metal field gates, width: 5 - 6 m.	nr	1.00		-
X237	TOTAL CARRIED TO BILL 2.4.1 COLLECTION P				

	BILL NO. 2	2.4 WATER S	STORAGE TAI	<u>NKS</u>	
DII I	2.4.4. 225m2 DEINEODOED CONODETE W	ATER			
DILL	_ 2.4.1- 225m3 REINFORCED CONCRETE WA	AIEK			
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL2.4.1 COLLECTION SHEET				
1	BROUGHT FORWARD FROM PAGE 1				-
2	BROUGHT FORWARD FROM PAGE 2				-
3	BROUGHT FORWARD FROM PAGE 3				-
4	BROUGHT FORWARD FROM PAGE 4				-
В	ILL 2.4.1 COLLECTION CARRIED TO WATER	R STORAGE	TANKS SUM	MARY PAGE	-

	BILL NO. 2.4 W	ATER	STORAGE TA	NKS	
В	 ILL NO 2.4.2: 108m³ ELEVATED WATER TANK				
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
Е	Foundation				
E322	Excavate in normal soil for tank raft foundation size 8.0m by 8.0m as per the given drawing	m ³	20.00		
E330	Excavate in Rock for tank foundations	m ³	20.00		
F611	Concrete Grade:15 for Blinding 20 mm aggregate	m³	20.00		
F722	Supply all materials, deliver to site, mix and vibrate reinforce concrete class 25/20 footings of size 4No 2.6m x 2.6m x 2.0m. Rate to include all formwork, reinforcement bars for concrete footing and foundation bolts for the tower (cage Y12 @ 150mm both directions)	m ³	30.00		
	Additional steel following design review	Kg	100.00		
	Steel Tower				
	Steel Tower				
M0.1	Supply all materials, deliver to site 18m high tank tower complete with walkway platform and cage ladder.	lump Sum	1.00		
N	108 cum Pressed Steel Tank Erection				
N285.2	Supply, deliver and install 108 steel tank side panels on 18m tower.	Sum	1.00		
N231.1	Galvanized mild steel internal ladder	m	3.00		-
ı	Plumbing Works				
I411.1	Supply and joint 250 mm dia. steel pipes including all jointing materials for the inlet to the tank.	m	30.00		
I411.1	Supply and joint 300 mm dia. steel pipes including all jointing materials for the outlet to the tank.	m	30.00		
l411.2	Supply and joint 250mm dia. steel pipes including all jointing materials for the overflow and washout to the tank.	m	40.00		
1411.3	Supply and joint including all jointing materials 300mm dia. pegler or equivalent gate valves.	nr	0.00		
l411.5	Supply and joint including all jointing materials 75mm dia. pegler or equivalent gate valves.	nr	1.00		
1712.2	OD 315 in trenches depth exceeding 1.5m	m	115.00		
	Supply and install a level indicator on the tank as approved by the Engineer	nr	1.00		
PAGE 6	TOTAL CARRIED TO BILL 2.4.2 COLLECTION P	AGE			

	<u>BILL NO. 2.4 W</u>	/ATER	STORAGE TAN	<u>KS</u>	
RI	LL NO 2.4.2: 108m3 ELEVATED WATER TANK				
<u>D</u>	EE NO 2.4.2. TOOMS EELVATED WATER TANK				
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
V	Painting				
V811	Supply and apply two coats of black bituminous paint to the inside of the tank.	m ²	188.00		-
V111.1	Supply and apply two coats of silver aluminium paint to the outside of the tank	m ²	188.00		-
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		-
	Elevated Tank in Miwongoni- Scour/overflow pipe from tank to drain				
ı	PIPEWORK-PIPES				
	provide and lay uPVC class B pipes, with push fit joints				
1712.2	OD 315 in trenches depth exceeding 1.5m	m	115.00		-
J	PIPEWORK-FITTINGS AND VALVES				
	Bends -short radius				
	plain ended				
I611 1	OD300, 45 ⁰	nr	1.00		_
0011.1	PIPEWORK-MANHOLE AND PIPEWORK ANCILLARIES	- 111	1.00		
K711	Allow for the reinstatement of roadside drains	Sum	1.00		-
KI51	Drainage manholes	nr	3.00		
X1	FENCES				
	Concrete post and Chainlink (Gauge 12.5g, mesh size 80mm x80mm, height 8feet, spacing at 3m)				
X136	Height: 2.50 - 3.00 m	m	80.00		-
X2	GATES AND STILES				
X237	Metal field gates, width: 5 - 6 m.	nr	1.00		-
PAGE 7 1	OTAL CARRIED TO BILL 2.4.2 COLLECTION PA	AGE			

E	BILL NO 2.4.2: 108m3 ELEVATED WATER TA	NK			
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KSh
NO.					
	BILL 2.4.2 COLLECTION SHEET				
	BROUGHT FORWARD FROM PAGE 6				-
	BROUGHT FORWARD FROM PAGE 7				-

	BILL NO. 2.4 W	/ATER	STORAGE TAN	IKS_	
	BILL NO. 2.4 WATER STORAGE TANKS	1			
ITEM					AMOUNT (KShs)
NO.	DESCRIPTION				AMOUNT (ROIS)
	BILL 2.4 WATER STORAGE TANKS WORKS				
2.4.1	BILL 2.4.1- 225m3 REINFORCED CONCRETE				-
2.4.2	BILL NO 2.4.2: 108m3 ELEVATED WATER TAN	K			-
	BILL 2.4 COLLECTION CARRIED TO BILL 2 S	UMMA	RY		_
	DILL 2.7 COLLECTION CANNED TO BILL 2 3	CIVILVIA			
					1

	BILL 2.5 - CONSUMER CON	INECTION	ECTIONS		
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
ı	TRENCHING, PIPES AND FITTINGS FOR CONSUMER CONNECTIONS				
	The following items combine a variety of works such				
	as earthworks, civil works, supplies, mechanical works				
	for pipe laying, testing, destroying of existing pipes, crossing and reinstatement of other underground				
	communications, etc,All costs are deemed to be				
	included and covered by the unit price!				
17	Transhing Dines and Dine Loving for Consumors				
17	Trenching Pipes and Pipe Laying for Consumers Connection				
	Supply and installation of HDPE pipework, including				
	all bends, fittings, specials, warning tapes, testing of				
	pipes as specified, disinfection of pipes; covering also				
	all necessary earthworks such as				
	excavation, backfilling in maximum 30cm layers from/to				
	level 30cm below finished ground level, bedding,				
	compaction and crossings for other underground				
	infrastructure. The item does not cover service valves				
	as listed below, but includes any additional excavation				
	required for these items.				
	Pipe trench dimensions, bedding layers etc, in line with the standard drawings and specifications.				
	and standard drawings and specifications.				
	HDPE Pressure Pipe HDPE PN10 unless otherwise				
	stated. Compression fittings				
l712.2	DN 32	m	8		-
J6	Pipe saddles or T-pieces				
	Supply and installation of connections to distribution				
	pipe by T-piece or pipe saddles-HDPE as specified,				
	include for all works and fittings(wherever practicable				
	saddles on larger pipes to be shares by several				
	consumers); for distribution pipe diameter				
621.6	On pipes not exceeding DN 50- DN 355. Connection to	Nr	1		-
	service line- pipe sizes varies				
7.3	Underground water meter chambers				
	Supply and installation of underground water meter				
	chambers, 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 motor itself! The shamber quitable for the				
K251.4	DN 30	Nr	1		-
	Sub -Total for 1No. Connection	Nle	1 000		-
	Total for 1000 number connections	Nr	1,000		_
PA	 AGE 1 TOTAL CARRIED TO BILL 2.5 COLECTION PAG	 }E			-
	I The state of the	_			-

	BILL 2.5 - CONSUMER CON	NECTIO	NS		T
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	X: Miscelleneous works				
	Connections and Installtion of meters to households				
X202	Connection works to consumers are to be carried out in liason with the respective WSP, who will receive, process and approve the applications for connections before submitting them to the Contractor.				
X202.1	Supply, Transport to site and hand over to Purchaser's Representative / WSP Store, DN 25mm Consumer Water Meters (Plastic Encased), Kent or approved equivalent; conforming to the given Technical Specifications with the neccesary fittings and accesories.	Nr	1,000		-
X202.2	Ditto but DN110mm-Woltmann zonal bulk water meters	No.	6		-
K6	Crossings				
K651	Allow for crossing existing boundary walls, including reinstatement to original state. Nominal bore not exceeding 200mm (Provisional)	Nr	200		-
K661	Allow for crossing existing fences (chain link, barbed wire etc.) and existing boundary walls , including reinstatement to original state. Nominal bore n.e. 200mm (Provisional)	Nr	300		-
K671	Allow for crossing existing drains and sewers, and reinstate these after construction of sewer has been completed. Pipe inside diameter n.e. 200mm (Provisional).	Nr	200		-
K7	Reinstatement				
K732	Breaking up, temporary and permanent reinstatement of murram road and concrete/tarmac pavements (Width of road cutting n.e 2m) with 300mm thick well graded stabilised gravel with 3% cement content base compacted using a 8-10 tonne roller to the satisfaction of the Engineer . Nominal bore ne 65mm . Contractor to allow for liason with relevant local authorities and obtaining approval for completed works in his rates.	m	480		-
	PAGE 2 TOTAL CARRIED TO BILL 2.5 COLECTION				-

	BILL 2.5 - CONSUMER CO	NNECTION	NS		
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL 2.5 Collection Page				
	Total Page 1				-
	Total Page 2				-
BILL	2.5 COLLECTION CARRIED TO BILL 2 SUMMARY				-

	BILL 2.6- ELECTRICAL MECHA	NICAL F	<u>OR WATER SUI</u>	PPLY	
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
10.X91.1	Allow PC sum for application to KPLC and electrical power installation	рс	1		
10.X91.2	Electrification of the Treatment Works. (including wiring and electrical fittings, 10Nr Compound Lighting using 10m light poles and LED bulbs.)	PC	1		
10.X91.5	Contractors overhead on Items X91.1 and X91.4	%	0		
	Supply and install and commision H Pole mounted 11/0.4kV 50Hz, 100KVA transformer with allnecessary accessories and fittings according to the specifications.	PC	1		
10.1	Provide, Suppy, Install and Commision Treated Water Supply Pumps including Control Panels from T-works to -Elevated Tanks (Q=4000 m3/d, H =100 m)	Nr	2		
10.2	Allow Sum for Surge Equipment e.t.c as identified and directed by the Resident Engineer and approved by the Project Manager	Nr	1		
10.3	Allow a PC Sum for factory visit for the pumps and solar equipment. Cost to cover for client and Engineer's representatives	PC	1		
10.40	Contractor's overhead on item 10.3	%			
	CONTROL BANGI				
	CONTROL PANEL Supply, install, test and commission contol panels for				
X91.4	37 KW power motor		1		
V01 6	Cabling for Controls 4C x 2.5mm PVC/SWA/PVC Cables to Backwash Tank	m	120		
X91.6 X91.7	Cable Glands	nr	6		
	BILL 2.6 COLLECTION CARRIED TO BILL 2 SUMM	MARY			

	BILL NO. 2.7 - PHOTO	/OLTAIC	SYSTEM		
TEM	DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
	PHOTOVOLTAIC SYSTEM				
	Supply, Install, Test, Commission and Set to Work the following:-				
\	250 Watt Monocrystalline Photovoltaic Module	No	600		
3	15,000 Watts, 3 Phase, Solar Inverter	No	10		
)	DC Control Unit	No	10		
D .	Distribution board suitable for connection of 16 inverters complete with 400A TP&N busbars, 16 x 25 A TP incoming circuit breakers (MCCBs) and 1 x 400A TP outgoing circuit breaker (MCCB). The distribution board to be housed in a weatherproof	No	1		
Ξ	Distribution board suitable for connection of 16				
	inverters complete with 200A TP&N busbars, 8 x 25 A TP incoming circuit breakers (MCCBs) and 1 x				
	200A TP outgoing circuit breaker (MCCB). The				
	distribution board to be housed in a weatherproof	No	1		
F	Main Switchboard complete with 2000 A TP&N busbars 1 x 200 A TP and 5 x 400 A incoming circuit breakers (MCCBs) and 1 x 2000 A TP outgoing circuit breaker (MCCB)The main switchboard to be housed in a weatherproof enclosure.	No	1		
G	Earthing comprising of 25x3mm copper tape, 1500mm long by 12mm diameter copper earth rod with clamp and inspection manhole with cover for the main switchboard and the distribution boards. Parallel rods to be used if proper earthing can not be achieved with one rod.	No.	1		
Н.	Programmable Logic Controller (PLC) equipped to handle all analogue and digital I/O signals complete with CPU, PLC Primary and Secondary Racks, PLC Input/Output Modules, Laptop Computer, Printer, Software, PLC Programming, PLC Control, Analogue Loop Isolators, Digital Isolating Relays, Surge Protection Devices, Interconnection Cables, etc.	Sum			
	10mm2 4core PVC/SWA/PVC copper cable from the inverter to the distribution board	М	651		
J	Cable Glands for item (I) above.	No	20		
(Cable lugs for item (I) above.	No	80		
	1 TOTAL CARRIED TO BILL 2.7 COLLECTION PAGE				

Bill No. 3.9 Page 1 of 165

	BILL NO. 2.7 - PHOTO	VOLTAIC	SYSTEM		
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)
L	95mm2 4core PVC/SWA/PVC copper cable from the distribution boards to the main switchboard	М	114		-
			0.5		
M	Cable Glands for item (A) above.	No	2.5		-
N	Cable lugs for item (A) above.	No	10		-
0	500mm2, 600/1000 Volt, stranded, single core, XLPE insulated copper cables, from the PV System Main Switchboard to the existing Grid connected low voltage, Switchboard (12 runs of 150m each) including terminations Price per single core cable.	М	203		-
_					
Р	Cable lugs for item (D) above.	No	3		-
Q	Allow for wiring between the PV modules and the inverter	No	600		-
R	Allow for all control cables necessary to complete the				
1	installation	Sum			-
S	Excavate trench for the cables in soft ground, average depth 600mm, lay cable, cover with "HATARI" tiles, back-fill and compact.	М	257		-
Т	100 mm UPVC ducts for carrying the cables across the road and to have concrete surround	М	11		-
J U	Allow for suitable mounting racks for the PV modules	No	600		-
V	Manufacturer's recommended spare parts during plant start-up and the first 2 years operation	Sum			-
W	Manufacturer's recommended special tools required for maintenance of equipment	Sum			-
Х	All drawings, manuals and instruction books in accordance with the specification	Sum			-
	Allow for 14 days Instruction Period - Training of the				
Υ	Employer's personnel in all respects of the operation and maintenance of the equipment	Sum			-
Z	The Tenderer is to describe hereunder and price any other items required to complete the installation but are not covered by the bills.				
_	a. s o. co. co. co. s y tilo sillo.				
		-			
PAGE	 2 TOTAL CARRIED TO BILL 2.7 COLLECTION PAGE				-

Bill No. 3.9 Page 2 of 165

BILL NO. 2.7 - PHOTOVOLTAIC SYSTEM								
ЕМ	DESCRIPTION	UNIT	QTY	RATE (Kshs)	AMOUNT (Kshs)			
	BILL 2.7 COLLECTION PAGE							
	From Page 1							
	From Page 2							
	Summary for 1 Solar Farm							
	BILL 2.7 TOTAL TO BILL 2 SUMMARY PAGE							

Bill No. 3.9 Page 3 of 165

	Bill No. 2.8 GUAR	Bill No. 2.8 GUARD HOUSE						
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)			
3.0	WALLING							
	External Walls							
	Selected Natural Stone Block Walling, Fine Chisel							
	Dressed or Machine Dressed, Reinforced with 20 swg							
	Hoop Iron at every third courses, and Bedded, Jointed							
3.1	and Pointed in Cement Mortar (1:5):- 200mm Thick walling	m2	25.00					
5.1	20011111 THICK Walling	IIIZ	23.00					
3.2	Extra over 200 mm walling for attached piers 400mm wide							
	projecting 200mm from the wall face	m	2.00					
	Labours							
3.3	Extra over walling for ruled horizontal and flush vertical joints							
		m2	25.00					
0.4	Dressed Stone Cills							
3.4	200mm Thick x 275mm wide dressed stone cill bedded,		2.00					
4.0	jointed and pointed in cement mortar on top of 200mm wall ROOF COVERINGS	m	2.00					
<u>4.0</u>	Guaranteed Strength Reinforced Concrete Class							
	25/20mm as described in:							
4.1	Roofing slab 150mm thick	m3	2.00					
	Formwork							
	Provide and fix shuttering including propping, strutting							
	and striking, all as specified							
4.0	Wrot Formwork - Class F3 Finish:-	0	40.00					
4.2	Soffist and edges of roof slabs 75 - 150mm wide	m2	13.00					
	Reinforcement							
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 including cutting, bending, propping with							
	spacers and tying as specified :-							
4.2	Reinforcement, all diameters	Kg	780.00					
	<u>Fittings</u>							
	The Following In Concrete Worktop 2000mm long x							
	600mm wide							
	75 71:1 : (10 (0) 00:00		4.00					
5.8	75mm Thick reinforced Concrete Class 20/20mm worktop	m2	4.00					
5.9	Mesh Reinforcement Ref. A 142 in concrete top slab.	m2	3.00					
5.10	Sawn formwork as described to horizontal soffites of							
5.10	worktop	m2	3.00					
5.11	Ditto to edges 75-150mm girth	m	7.00					
5.12	20mm Thick cement and sand (1:4) screed to top and sides							
	of worktop	m2	12.00					
5.13	12.5mm Thick gauged cement plaster to horizontal soffites	<u> </u>						
	of benches	m2	11.00					
5.14	Prepare and apply two coats plastic emulsion paint to	0	44.00					
E 45	plastered horizontal soffites of worktop	m2	11.00					
5.15	Form groove 100mm deep in masonry wall to receive 75mm edge of concrete bench, build in last and make good	m	7.00					
	IRONMONGERY	111	1.00					
7 0								
<u>7.0</u>								
7.0	Supply and Fix the following Ironmongery selected from "Union" Catalogue complete with matching							
7.0	Supply and Fix the following Ironmongery selected	Nr	3.00					

	Bill No. 22 CHARD HOUSE				
ITEM	Bill No. 2.8 GUARD HOUSE DESCRIPTION				
NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
7.2	Three-lever mortice lock as "Union Ref: 680-06-77AS with	NI.	4.00		
	set of brass lever handles and furniture	Nr	1.00		
7.3	Rubber door stop fixed to floor or wall with screw	Nr	1.00		
-	1				
7.4	Solid 251/C91 hat and coat hook with rubber buffer	Nr	1.00		
0.0	METALWORK				
<u>8.0</u>	METALWORK Steel Casement Windows				
	Supply and Fix the following Standard Section				
	Horizontal Bar Type Steel Casement Windows with one				
	coat lead oxide primer complete with opening				
	accessories including bedding and pointing around				
	frames in cement mortar:-				
8.1	Window size 830 x 1200mm high with 2 No. top-hung				
	ventilators each with permanent ventilator hood over (W3a)	Nr	2.00		
		INI	2.00		
	Burglar-Proofing to Windows				
	Burglar-proofing comprising 25 x 3mm thick vertical				
	and horizontal mild steel members at 150mm centres,				
	including one coat lead oxide primer and fixing to the following windows :-				
	lollowing windows				
8.3	To window size 830 x 1200mm high (W3a)	Nr	2.00		
	Steel Doors				
	Pressed Metal Doors				
	Supply and Fix the following Pressed Metal Doors with 100 x 50mm Stiles and Top Rails, 150 x 50mm Middle and Bottom				
	Rails With Pressed Metal Infill 100 x 50mm Pressed Metal				
	Frames, Including Hinges, Pad Bolts and Tower Bolts, All To				
	Manufacturer's Details, with one coat lead oxide primer				
	complete with opening accessories including bedding and				
	pointing around frames in cement mortar:-				
9.0	Single door size 900 x 2200 mm high PLASTERING	Nr	1.00		
9.0	12.5mm Thick Gauged Cement Plaster as described				
	internally on :-				
9.1	Concrete or blockwork	m2	25.00		
9.2	Reveals of openings	m2	2.00		
	Screeds				
	Bonded cement and sand (1:4) screed bed in one coat.				
	well bonded to concrete base as described:-				
9.3	40mm Thick paving with wood float finish on concrete	m2	11.00		
9.4	100 x 20mm Thick skirting laid with a square top edge and coved junction with floor finish	m	7.00		
10.0	GLAZING	m	7.00		
10.0	4mm Thick Clear Sheet Glass And Glazing to Steel				
	Casements with putty in panes:-				
10.1	0.10 - 0.50 Square metres	m2	2.00		
<u>11.0</u>	PAINTING AND DECORATING Prepare and apply one coat aluminium primer before				
	fixing to:-				
11.1	Backs of wood 0-100m girth	m	1.00		
	Prepare, knot, prime, stop and apply three coats first				
	quality gloss paint to wood surfaces				
	Internally on:-				
11.4	Surfaces 0-100mm girth	m	13.00		
11.5	Ditto 200-300m girth	m	7.00		
11.6	General surfaces of doors (measured flat overall)	m2	20.00		
PAG	E 2 TOTAL CARRIED TO BILL 2.8 COLLECTION SHEET				

	Bill No. 2.8 GUARD HOUSE				
				<u> </u>	
NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Prepare, touch up primer and apply three coats gloss				
	paint : Externally on:-				
11.7	General surfaces of glazed metal windows, including burglar-				
	proofing (measured flat overall) Internally on:-	m2	2.00		
11.8	General surfaces of glazed metal windows, including burglar- proofing (measured flat overall)	m2	2.00		
	Prepare and apply three coats exterior quality plastic emulsion paint:- Externally on:-				
11.9	Fair-faced horizontal sides and soffites of beams	m2	4.00		
	Prepare and apply three coats interior quality plastic emulsion paint:-				
	Internally on:-				
11.10	Plastered concrete or blockwork	m2	13.00		
11.11	Ditto reveals of openings	m2	2.00		
	Prepare and apply three washable distemper as described to:-				
11.12	Horizontal soffites of suspended ceilings slab	m2	11.00		
11.13	Horizontal surfaces 100-200mm girth	m	11.00		
	Prepare and apply High Strength Non-skid Epoxy Flooring Paint to:-				
11.14	Cement and sand screed floors, skirtings, treads, risers, etc.	m2	11.00		
	Electrical Works				
X931.3	1 No twin sockets, 1 No bulb lightfitting, 1 No switch;	nr	3.00		
	Precast Concrete Paving Slab				
E635.1	Precast Concrete Paving slabs size 600 x 600 x 50mm Thick laid on and including 50mm thick bed of sand and jointing and pointing in cement mortar around the house	m ²	15.00		
PAG	E 3 TOTAL CARRIED TO BILL 2.8 COLLECTION SHEET				

	Bill No. 2.8 GUARD HOUSE	I.			
NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill No. 2.8 GUARD HOUSE				
	BILL 2.8 COLLECTION SHEET				
	Brought Forward From Page 1				
	Brought Forward From Page 2				
	Brought Forward From Page 3				
	DILL NO 2 2 TOTAL CARRIED TO BULL 2 CUMMARY				
	BILL NO 2.8 TOTAL CARRIED TO BILL 2 SUMMARY				
			l .		

	Bill No.3 Kitui Summary	
BILL NO.	DESCRIPTION	REVISED AMOUNT (KShs)
3.1	2 No. Guard houses	-
3.2	Consumer Connections - Sewer	-
3.3	Rehabilitation Works- Sewer Pump	-
	BILL 3 TOTALTO GRAND SUMMARY	-

	BILL 3.1 No. 0	SUARD HOU	SE_		
	BILL 3.1 - CONSTRUCTION	ON OF 2 GU	ARD HOUSE	<u>s</u>	
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
1.0	SUBSTRUCTURES (PROVISIONAL)				
	Excavations and Earthworks				
1.1	Excavate average 200mm deep to remove vegetable				
1.1	soil and cart away	m2	18.48		-
	Excavate 0.00-1.50m deep starting from stripped level to receive :-				
1.2	Foundations	m3	11.00		-
	Extra over excavation in any position for:-				
1.3	Excavating in compacted gravel or decomposed rock	m3	5.00		-
1.4	Excavating in hard rock of all classes	m3	3.00		-
	Approved selected Filling				
1.4	Fill and ram selected excavated materials around foundations and buildings	m3	9.00		-
	Approved filling as described:-				
1.5	Provide and deposit approved hardcore fill material 200mm thick in making up levels including achieving satisfactory compaction	m2	11.00		
1.6	Provide, lay and level out, 50mm thick fine crushed stone, sand or gravel blinding to surface of filling, including watering and rolling to achieve satisfactory compaction	m2	11.00		-
	Disposal of Surplus Spoil:-				
1.7	Cart away surplus excavated materials to an approved dumping site	m3	25.00		_
	autiping one	0			
	<u> </u>				
•					
PAGE 1	TOTAL CARRIED TO BILL 3.1 COLLECTION PAGE				

IT	BILL 3.1 - CONSTRUCTIO	N OF 2 GU	ARD HOUSE	<u>s</u>	
NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
	Anti-Termite Treatment				
1.8	Chemical anti-termite treatment to surface of filling with				
	an approved insecticide	m2	11.00		
	Damp-proof Membrane_				
1.9	500 Gauge polythene sheeting, laid over hardcore in two layers	m2	11.00		
	Concrete Work:				
	Mass Concrete Class 15 (1:4:8) , 40mm maximum aggregate as described in:-				
1.10	50mm thick blinding under foundation concrete	m2	13.00		
	Guaranteed Strength Reinforced Concrete Class 20/20mm maximum aggregate as described in:-				
1.11	Foundation trenches, columns and piers combined with foundation trenches	m3	2.00		
1.12	100mm Thick surface bed	m2	11.00		
	Reinforcement_				
	Fabric Reinforcement No. A142 Mesh Size 150 x 150mm Weighing 2.22 kgs Per m2 , Including Bends, Tying Wire and Distance Blocks:-				
1.13	Fabric reinforcement with minimum 150mm wide side and end laps, laid in bed	m2	11.00		
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 including cutting, bending, propping with spacers and tying as specified :-				
1.14	Reinforcement, all diameters	Kg	94.00		
				 	

	BILL 3.1 - CONSTRUCTION OF 2 GUARD HOUSES		I	1	
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
NO.	<u>Formwork</u>				
	Provide and fix shuttering including propping. strutting and striking, all as specified				
	Wrot Formwork - Class F3 Finish:-				
1.15	Edges of beds and pavings 75 - 150mm wide	m	13.00		
	Walling.				
	Natural Stone Block Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at every third course, and Bedded, Jointed and Pointed in Cement Mortar (1:5):-				
1.16	200 mm Walling	m2	20.00		
1.17	Extra over 200 mm walling for attached piers 400mm wide projecting 200mm from the wall face	m	1.00		
	Damp-proof course:				
	Bituminous felt damp-proof course as described:-				
1.18	200mm Wide under walls	m	13.00		
	Plinths.				
1.19	15mm Cement and sand (1:4) render to plinth walls, finished with a wood float	m2	11.00		
1.20	Prepare and apply two coats of bituminous paint on rendered plinth walls	m2	13.00		
	Disposal of Water				
1.21	Keep excavations free from all water except spring or running water Planking and Strutting	Item	1.00		
1.22	Allow for normal planking and strutting to uphold sides of excavations (except special shoring or sheet steel piling)	Item	1.00		
			<u> </u>		
PAGE 3	TOTAL CARRIED TO BILL 3.1 COLLECTION PAGE				-

ITEM	BILL 3.1 - CONSTRUCTION OF 2 GUARD HOUSES DESCRIPTION				
NO.	SUPERSTRUCTURE	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
<u>2.0</u>	CONCRETE, FORMWORK, REINFORCEMENT				
	Guaranteed Strength Reinforced Concrete Class 25/20mm as described in:				
	25/2011111 as described III.				
2.1	Beams	m3	1.00		-
	<u>Formwork</u>				
	Provide and fix shuttering including propping. strutting and striking, all as specified				
	Wrot Formwork - Class F3 Finish :-				
2.2	Sides and soffites of beams	m2	11.00		-
	Reinforcement				
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 including cutting, bending, propping with				
	spacers and tying as specified :-				
2.3	Reinforcement, all diameters	Kg	94.00		-
3.0	WALLING				
	External Walls				
3.1	Selected Natural Stone Block Walling, Fine Chisel Dressed or Machine Dressed, Reinforced with 20 swg Hoop Iron at every third courses, and Bedded, Jointed and Pointed in Cement Mortar (1:5):- 200mm Thick walling	m2	25.00		
		1112	20.00		
3.2	Extra over 200 mm walling for attached piers 400mm wide projecting 200mm from the wall face	m	2.00		
3.3	Labours Extra over walling for ruled horizontal and flush vertical				
0.0	joints	m2	25.00		-
					_
PAGE 4	TOTAL CARRIED TO BILL 3.1 COLLECTION PAGE				

	BILL 3.1 - CONSTRUCTION OF 2 GUARD HOUSES				
ITEM	DESCRIPTION				
NO.		UNIT	QTY	RATE (KShs)	AMOUNT (KShs
3.4	200mm Thick x 275mm wide dressed stone cill bedded,				
• • •	jointed and pointed in cement mortar on top of 200mm				
	wall	m	2.00		
4.0	ROOF COVERINGS				
	Guaranteed Strength Reinforced Concrete Class				
	25/20mm as described in:				
4.1	Roofing slab 150mm thick	m3	2.00		
	Formation				
	Formwork				
	Provide and fix shuttering including propping,				
	strutting and striking, all as specified				
	Wrot Formwork - Class F3 Finish:-				
	WIGHT OTHWORK - Glass 1 of Illish				
4.2	Soffist and edges of roof slabs 75 - 150mm wide	m2	13.00		
	Reinforcement_				
	Remorcement				
	Provide and Fix High Tensile Steel Reinforcement to				
	SRN 127 including cutting, bending, propping with spacers and tying as specified :-				
	spacers and tyring as specified				
4.2	Reinforcement, all diameters	Kg	780.00		
	Filed and				
	<u>Fittings</u>				
	The Following In Concrete Worktop 2000mm long x				
	600mm wide				
5.8	75mm Thick reinforced Concrete Class 20/20mm				
0.0	worktop	m2	4.00		
5.9	Mesh Reinforcement Ref. A 142 in concrete top slab.	m2	3.00		
5.10	Cause formations described to beginners affited of				
5.10	Sawn formwork as described to horizontal soffites of worktop	m2	3.00		
	·				
		•			
	PAGE 5 TOTAL CARRIED TO BILL 3.1 COL	LECTION	PAGF		
	. AGE O TO THE GRANGED TO DIEE 0.1 OUL				<u> </u>

	BILL 3.1 - CONSTRUCTION OF 2 GUARD HOUSES		1		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
NO.				` /	
5.11	Ditto to edges 75-150mm girth	m	7.00		-
5.12	20mm Thick cement and sand (1:4) screed to top and				
	sides of worktop	m2	12.00		-
5.13	12.5mm Thick gauged cement plaster to horizontal				
0.10	soffites of benches	m2	11.00		_
5.14	Prepare and apply two coats plastic emulsion paint to				
	plastered horizontal soffites of worktop	m2	11.00		-
F 4F	Farma manage 100mm dans in managemental to manage				
5.15	Form groove 100mm deep in masonry wall to receive 75mm edge of concrete bench, build in last and make				
	good	m	7.00		
	9000	111	7.00		
7.0	IRONMONGERY				
	Supply and Fix the following Ironmongery selected				
	from "Union" Catalogue complete with matching				
	screws:-				
7.1					
7.1	Pairs 100 mm Stool hoovy duty washered but his	NIm	2.00		
	Pairs 100 mm Steel heavy duty washered butt hinges	Nr	3.00	 	<u> </u>
7.2	Three-lever mortice lock as "Union Ref: 680-06-77AS				
1.2	with set of brass lever handles and furniture	Nr	1.00		
7.3	Rubber door stop fixed to floor or wall with screw	Nr	1.00		
7.4	Solid 251/C91 hat and coat hook with rubber buffer	Nr	1.00		
8.0	METALWORK				
	Steel Casement Windows				
	Supply and Fix the following Standard Section				
	Horizontal Bar Type Steel Casement Windows with				
	one coat lead oxide primer complete with opening				
	accessories including bedding and pointing around				
	frames in cement mortar:-				
8.1	Window size 830 x 1200mm high with 2 No. top-hung				
	ventilators each with permanent ventilator hood over	NI.	2.00		
	(W5) Burglar-Proofing to Windows	Nr	2.00		
	Burgial-Frooting to Willdows				
					-
				 	
	1	<u> </u>	1	<u> </u>	
	PAGE 6 TOTAL CARRIED TO BILL 3.1 CO	LLECTION	PAGE		_

	BILL 3.1 - CONSTRUCTION OF 2 GUARD HOUSES				
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
	Burglar-proofing comprising 25 x 3mm thick vertical				
	and horizontal mild steel members at 150mm				
	centres, including one coat lead oxide primer and				
	fixing to the following windows :-				
8.3	To window size 830 x 1200mm high (W5)	Nr	2.00		
	Steel Doors				
	Pressed Metal Doors				
	Supply and Fix the following Pressed Metal Doors with 100 x 50mm Stiles and Top Rails, 150 x 50mm Middle and Bottom Rails With Pressed Metal Infill 100 x 50mm Pressed Metal Frames, Including Hinges, Pad Bolts and Tower Bolts, All To Manufacturer's Details, with one coat lead oxide primer complete with opening accessories				
	including bedding and pointing around frames in cement mortar:-				
	Single door size 900 x 2200 mm high	Nr	1.00		
<u>9.0</u>	PLASTERING 12.5mm Thick Gauged Cement Plaster as described				
	internally on :-				
9.1	Concrete or blockwork	m2	25.00		
9.2	Reveals of openings	m2	2.00		
	Screeds				
	33.553.5				
	Bonded cement and sand (1:4) screed bed in one coat, well bonded to concrete base as described:-				
9.3	40mm Thick paving with wood float finish on concrete	m2	11.00		
9.4	100 x 20mm Thick skirting laid with a square top edge and coved junction with floor finish	m	7.00		
10.0	GLAZING				
10.0	4mm Thick Clear Sheet Glass And Glazing to Steel Casements with putty in panes:-				
10.1	0.10 - 0.50 Square metres	m2	2.00		
	+				
	+				
-					
	-				
	PAGE 7 TOTAL CARRIED TO BILL 3.1 COL	LECTION	PAGE		-

	BILL 3.1 - CONSTRUCTION OF 2 GUARD HOUSES				
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
44.0	DAINTING AND DECODATING				
<u>11.0</u>	PAINTING AND DECORATING Prepare and apply one coat aluminium primer before fixing to:-				
11.1	Backs of wood 0-100m girth	m	1.00		
	Prepare, knot, prime, stop and apply three coats first quality gloss paint to wood surfaces Internally on:-				
11.4	Surfaces 0-100mm girth	m	13.00		
11.5	Ditto 200-300m girth	m	7.00		
11.6	General surfaces of doors (measured flat overall)	m2	20.00		
	Prepare, touch up primer and apply three coats gloss paint :				
	Externally on:-				
11.7	General surfaces of glazed metal windows, including burglar-proofing (measured flat overall)	m2	2.00		
	Internally on:-				
11.8	General surfaces of glazed metal windows, including burglar-proofing (measured flat overall)	m2	2.00		
	Prepare and apply three coats exterior quality				
	plastic emulsion paint:- Externally on:-				
11.9	Fair-faced horizontal sides and soffites of beams	m2	4.00		
	Prepare and apply three coats interior quality plastic emulsion paint:-				
	Internally on:-				
11.10	Plastered concrete or blockwork	m2	13.00		
11.11	Ditto reveals of openings	m2	2.00		
				l l	

	DUL 64 CONSTRUCTION OF COUADD HOUSE				
ITEM NO.	BILL 3.1 - CONSTRUCTION OF 2 GUARD HOUSES DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Prepare and apply three washable distemper as				
	described to:-				
11.12	Horizontal soffites of suspended ceilings slab	m2	11.00		
11.13	Horizontal surfaces 100-200mm girth	m	11.00		
	Prepare and apply High Strength Non-skid Epoxy Flooring Paint to:-				
11.14	Cement and sand screed floors, skirtings, treads, risers, etc.	m2	11.00		
					_
	PAGE 9 TOTAL CARRIED TO BILL 3.1 COL	LECTION I	PAGE		-

	BILL 3.1 - CONSTRUCTION OF 2 GUARD HOUSES				
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	Bill No.3.1 COLLECTION SHEET				
	Brought Forward From Page /1				
	Brought Forward From Page /2				
	Brought Forward From Page /3				
	Brought Forward From Page /4				
	Brought Forward From Page /5				
	Brought Forward From Page /6				
	Brought Forward From Page /7				
	Brought Forward From Page /8				
	Brought Forward From Page /9				
-					
	TOTAL FOR 1 No. GUARD HOUSE				
	TOTAL FOR 2 No. GUARD HOUSE	Nr	2.00	-	
	DULL OF TOTAL OVERLED TO BUY STORY	<u> </u>			
	BILL 3.1 TOTAL CARRIED TO BILL SUMMARY PAGE				-

BILL No. 3.2 - CONSUMER SEWER CONNECTIONS					
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	The Quantities given under this Bill are for 1 No. Connection.				
	It is estimated that the approximate number of Consumer Sewer Connections to be carried out in Kitui is 500. The connection works are to be carried out in liason with with Kitui Water and Sanitation Sewerage Co. Ltd (KITWASCO), who will receive, process and approve the applications for connections.				
	These works are to be carried out in built up areas with limited working space. No wayleave has been arranged for and all the working area shall be organized by the contractor at his own cost. Sections of the sewer line to be laid beside existing active resources (electrical, water, e.t.c) and storm water drain within the project area. Use of Bulk excavation machines may not be possible in some areas. Contractors rates to allow for double haulage of excavated materials or any additional costs for execution of the works.				
	Specific conditions in execution of these Works are deemed to be included in the Contractor's rates. The Contractor will be required to submit Method Statement for execution of works under these specific conditions for approval prior to execution of the works. These include but are not limited to the following: i. No blasting will be permitted in these areas iii. The Contactor to maintain uninterrupted continuity of water supply in existing mains 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. The contractor to ensure uninterrupted flow of sewage in the existing sewers during connection of proposed line to the existing sewers				
	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	15.00		
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 - PIPES				
	A - Supply of Pipes				
	Excavation, laying and jointing is included in 'B' - Pipe Laying				
	Supply, Transport to Site and Store. The rate to include jointing materials, bolts, gaskets, rubber rings, etc.				
I511	200mm outside diameter DWC sewer pipe	m	15.00		
	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 tips identified by the Contractor in liaison with the Local Authority, transport of material from site store to working areas, laying and jointing of pipes and fittings.				
I512	Depth not exceeding 1.5m	m	15.00		
	CLASS K: MANHOLES AND PIPEWORK ANCILLARIES				
K21	Masonry Inspection Chambers				
	Household/Property Connection Chambers (IC)				
K-230	Provide all materials, construct and test sewer inspection chambers of depth not exceeding 1.0m, internal dimensions 450mm x 600mm constructed with 150mm thick masonry walls reinforced with hoop irons at every alternate course as shown on Drawing. Each Chamber is to serve two plots. Rate to include for Supply, installation and testing 250mm Dia with 160mm dia branch Y Junctions connecting the main sewer line to the IC as shown on the drawing. Rate to also include for all associated couplings, access plug, diameter 160mm uPVC extension pipework to individual plots length not exceeding 15m and 600x450mm medium duty composite inspection chamber cover.	nr	1		-

	BILL No. 3.2 - CONSUMER SEWER CONNECTIONS				
	DIEL NO. 3.2 - CONCOMEN GENER CONNECTIONS				
NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
K6	Crossings				
14054					
K651	Allow for crossing existing boundary walls, including reinstatement to original state. Nominal bore not exceeding 200mm (Provisional)	Nr	1.00		-
11001					
K661	Allow for crossing existing fences (chain link, barbed wire etc.), including reinstatement to original state. Nominal bore n.e. 200mm (Provisional)	Nr	1.00		-
K671	Allow for crossing existing drains and sewers, and reinstate these after construction of sewer has been completed. Pipe inside diameter n.e. 200mm (Provisional)	Nr	1.00		-
			•		
	PAGE 3 TOTAL CARRIED TO BILL 3.2 COLLECTION PAGE				-

	BILL No. 3.2 - CONSUMER SEWER CONNECTIONS				
	DECORIDE ON				
NO.	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
				` ′	
2	FROM PAGE 1				-
3	FROM PAGE 2				_
	COST ONE (1) UNIT CONSUMER CONNECTION				-
	TOTAL AMOUNT FOR 500 CONNECTIONS		500.00		_
	TOTAL AMOUNT TO COOK CONNECTIONS		000.00		
		-			
	BIILL 3.2 TOTAL CARRIED TO BILL 3 SUMMARY PAGI	_ E		I	-
		_			-

	BILL 3.3 - REHABILITATION WORKS				
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
1.1	PUMP HOUSE				
1.1.2	Allow PC sum of Kshs. 3,000,000 for Connection to power both Nzeu and Kalundu pump houses	PS			
1.1.5	Supply and install a chain block with a lifting capacity of 1 tonne for a vertical distance of 10m.				
	Include all associated equipment and fittings.	no	2		
	Kalundu Pump House				
1.1.6	Rehabilitation of existing stormwater drainage	LS	1		
1.1.7	Allow PC sum of Kshs. 1,500,000 for Supply, Storm water control civil works	PS	1		
1.1.9	Allow PC sum of Kshs. 800,000 for Rehabilitation of pump house buildings	PS	1		
	Rehabilitation of the existing sewer line				
1.1.10	Unblocking of 50 blocked manholes and sewer lines	nr	50		
1.1.11	Replacement of manhole covers	nr.	100		
	Allow PC sum of Kshs. 5,000,000 for Supply, deliver to site, install, test and commission Standby Generator set including residential silencer, control panel, exhaust system, 400 litre base tank and antivibration mountings.	PC			
	Allow PC sum of 5,000,000 for Supply,Supply, Install, test and commission heavy duty 2No. sewage pumps each of capacity 100L/sec. Include for all excavation, backfilling, demolition, pipe work, concrete works, Control panel for the pumps (the controls units shall be housed in a wall mounted dust and dump proof sheet steel enclosure with hinged and lockable front door, and door switched power isolator)	PC			
	BILL 3.3 COLLECTION CARRIED TO BILL 3				
	SUMMARY				

BILL NO 4: WOTE SUMMARY					
Bill No.	Item Description	Amount (Kshs.)			
4.1	1No. BOREHOLES AND 1 No. WATER KIOSK				
4.2	BOREHOLE WATER PIPELINE AND WATER KIOSK				
4.3	SOLARIZATION OF BOREHOLE				
4.4	PHOTOVOLTAIC SYSTEMS				
4.5	KAITI WATER SUPPLY -SUMP of 400 m3 RC				
4.6	KAITI WATER SUPPLY -Kaiti Weir				
4.7	UNOA TANK 150 m3				
4.8	KAITI WATER TRANSMISSION MAIN				
4.9	KAITI WATER DISTRIBUTION PIPELINE				
4.10	CHLORINE HOUSE AND OPERATOR'S HOUSE				
4.11	KAITI WATER SUPPLY ELECTRICAL AND MECHANICAL				
4.12	CONSTRUCTION OF 1 No. GUARD HOUSE				
	GRAND SUMMARY FOR WOTE TOWN				

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS)
	Allow Provisonal Sum of Kshs 350,000.00 to provide, install and commission a			,	` '
301	submersible pump capable of delivering 3.3m ³ /hr against a head of 250m or as	PC	1		
	directed by the Project Manager				
	NB: Indicate the make of the pump and motor. Size of casing is 152mm.				
	Pump Make :				
	Country of Origin:				
	Make of Motor:				
302	Provide, install and commission a 3 phase, 415Vac, DOL control panel for the	LS	1		
302	above pump comprising of the following:- Provisional		'		
	b) Appropriate rating contactor				
	b) Appropriate rating thermal overload relay				
	c) Over/under voltage phase failure protection relay			ļ	
	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			<u> </u>	
	TRIPPED", yellow marked "BOREHOLE LOW, white marked "TANK HIGH" etc				
	I) Hours run counter range 0 - 99999 hours				
				1	
000	m) Cable looping box of appropriate rating		4		
303	Enhanced MP204 Blackbox unit to integral circuit	No	1		
	NB: A schematic and control wiring diagram MUST be supplied with the starter.				
	11217 Continues and continues thing alagram moot are cappined than the clarical				
	3" class B G.I rising main pipe c/w pipe locking clamp including				
304	connecting to the existing tank and connecting for both water offices and Main	M	300		
	House boreholes.				
305	Cumply of 2" arene applicate to the vicing main	Na	50		
303	Supply of 3" crane sockets to the rising main	No.	50		
	Provide and install one 3" bulk flow meter class B (type and make to be approved				
306	by the Project Manager) c/w Non Return Valve at the well head. Rate to include all	No.	1		
	pipe and fittings at the well head.				
307	Electrode cable(pair)	М	580		
	, ,				
308	Electrode pencils (pair)	No.	1		
309	25mm Dipper tube complete	М	284		
310	1.5mm2 Flat cable for float switch	M	100		
311	2"*6" borehole cover c/w sundries	No.	1		
312	1.5mm² 2-CORE underground armoured cable – Electrodes	М	100		
313	63A switch fuse "MEM" or equivalent	No.	1		
313	OSA SWILCH TUSE INICINI OF EQUIVALENT	INO.	'		
316	Allow a sum for testing and commissioning of the borehole equipping works.	LS	1		
	 				
319	Provide for float switch to elevated tank and connect to the control panel and pump	sum	1		
					_
320	4 FT Copper earth rod complete with clamp	Set	1		
321	Lead cable 10.0m2 single core (for earthing)	М	10	<u> </u>	
000	0.1	.,			
322	Submersible cable rubber sheathed 25mm2 3 core submersible armored cable	М	284		
323	Underground armored cable 25mm2 3 core	М	95		
JZJ		IVI	90		
	Pump Control House			ļ	
	Construction of a well ventillated pump house 3mx2m internal dimension and 2.2m				
	clear height with conrete roof slab reinforced with Y12 at 150 c/c both directions.				
	Rate to include provision of steel door of gauge 16 (1.5mm thick) metal plates				
	complete with two anti-theft and weather resistant padlocks all to the approval of	LS	1		
324	· · · · · · · · · · · · · · · · · · ·	I			
324	the project manager. the walss shall be constructed with 225*225mm stone		ı	1	
324	the project manager. the walss shall be constructed with 225*225mm stone masonry fine dressed. Place hoop iron 3/4" on				
324	masonry fine dressed. Place hoop iron 3/4" on				
324	masonry fine dressed. Place hoop iron 3/4" on every coarse.				
324	masonry fine dressed. Place hoop iron 3/4" on				
	masonry fine dressed. Place hoop iron 3/4" on every coarse.	1.0			
324	masonry fine dressed. Place hoop iron 3/4" on every coarse. Fencing Works	LS	1		
325	masonry fine dressed. Place hoop iron 3/4" on every coarse. Fencing Works Construction of borehole area perimeter wall (Masonary)approximately 50m long by	LS	1		

TEM NO.	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS)
	Excavation and backfilling				
501	Excavate pipe trench commencing from ground level to a minimum depth of 1.0 meter. Rate to include general bush clearing, laying the pipe and backfilling	МЗ	875		
	Pipe Work - Supply, lay, joint, pressure test				
	Pipes				
503	63mm Dia. HDPE PN 12.5 pipes	М	1,500		
505	50mm Dia. HDPE PN 12.5 pipes	M	1,000		
	Pipe fittings				
	Couplings				
506	63mm HDPE coupler	No	15		
507	63mm HDPE male adapter couple	No	30		
508	63mm Peglar gate valve	No	6		
509	63mm HDPE end caps	No	3		
510	22x2.5 Bolts and Nuts	No	24		
511	32mm Air valve double olifice with isolating gate valve	No	5		
512	32mm Gate valve peglar	No	6		
513	32mm nipple G.I.	No	10	-	
514	1/2" consumer meters	No	3	-	
F4F	Chambers	NI-			
515	Masonry chambers for air valves, sluice valves	No	6		
F10	Road Crossings	No	2		
516	Road Crossing 3-10m wide (provisional) Provision for assorted fittings installed as directed by the project		3		
517	manager	PC	1		
518	Construction of a standard water kiosk 3mx2m internal dimension and 2.2m clear height with conrete roof slab reinforced with Y12 at 150 c/c both directions. Rate to include provision of steel door of gauge 16 (1.5mm thick) metal plates complete with two anti-theft and weather resistant padlocks all to the approval of the project manager. the walls shall be constructed with 225*225mm naturalstone masonry fine dressed. Place hoop iron 3/4" on every coarse. The cost to include installation of 10,000 litres PVC tank and associated fittings and plumbing works	No	1		

BILL NO.	4.3 - SOLARIZATION OF BOREHOLE				
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS)
601	Supply and installation of monocrystalline solar modules of 335W capacity capable to power submersible pumps or as directed by the Project Manager	Nr.	20		
602	Solar Inverter/Controller for 18.5kw (Hybrid)	Nr.	1		
603	PV Disconnet Switch 1000/16A	Nr.	1		
604	Changeover Switch	Nr.	1		
605	1000*500*250mm	Nr.	1		
	Lightening Arrestor	Nr.	1		
	Earthrod c/w clamp	Nr	1		
	10MM2X2 SOLAR PV cable	m	100		
610	6MM2X2 SOLAR PV cable Solar Module steel support structure 3m above the ground surface with members of the following specifications: Angle line 40x40x3mm frame; SHS 50X50X3mm - horizontal and vertical beams; SHS 75x75x3mm stands; SHS 40x40x3mm bracings and MS plate 6mm thick	m LS	1		
Total for I	nstalling 1 No. Solar System				
			-		
	_				
				_	_
	_				
	Total for 1 No. Boreholes Carried to Summary Page	. —			1

	BILL 4.4 - PHOTOVOLTA	C SYSTEMS (KAITI)					
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT		
	Supply, Install, Test, Commission and Set to Work the following:-						
A	250 Watt Monocrystalline Photovoltaic Module	No	325.00				
В	15,000 Watts, 3 Phase, Solar Inverter	No	10.00				
С	DC Control Unit	No	10.00				
D	Distribution board suitable for connection of 16 inverters complete with 400A TP&N busbars, 16 x 25 A TP incoming circuit breakers (MCCBs) and 1 x 400A TP outgoing circuit breaker (MCCB). The distribution board to be housed in a weatherproof enclosure.	No	1.00				
E	Distribution board suitable for connection of 16 inverters complete with 200A TP&N busbars, 8 x 25 A TP incoming circuit breakers (MCCBs) and 1 x 200A TP outgoing circuit breaker (MCCB). The distribution board to be housed in a weatherproof enclosure.	No	1.00				
F	Main Switchboard complete with 2000 A TP&N busbars 1 x 200 A TP and 5 x 400 A incoming circuit breakers (MCCBs) and 1 x 2000 A TP outgoing circuit breaker (MCCB)The main switchboard to be housed in a weatherproof enclosure.	No	1.00				
G	Earthing comprising of 25x3mm copper tape, 1500mm long by 12mm diameter copper earth rod with clamp and inspection manhole with cover for the main switchboard and the distribution boards. Parallel rods to be used if proper earthing can not be achieved with one rod.	No.	1.00				
Н	Programmable Logic Controller (PLC) equipped to handle all analogue and digital I/O signals complete with CPU, PLC Primary and Secondary Racks, PLC Input/Output Modules, Laptop Computer, Printer, Software, PLC Programming, PLC Control, Analogue Loop Isolators, Digital Isolating Relays, Surge Protection Devices, Interconnection Cables, etc.	Sum					
1	10mm2 4core PVC/SWA/PVC copper cable from the inverter to the distribution board	М	651.00				
J	Cable Glands for item (I) above.	No	20.00				
K	Cable lugs for item (I) above.	No	80.00				
PAC	GE 1 TOTAL CARRIED TO BILL 4.4 COLLECTION	PAGE					

ITEM	DESCRIPTION			OUTSTAI	NDING
	DESCRIPTION		QTY	RATE	AMOUNT
		UNIT	QII	KAIL	AWOUNT
	95mm2 4core PVC/SWA/PVC copper cable from	M	114		
L	the distribution boards to the main switchboard				
М	Cable Glands for item (A) above.	No	2.51		
N	Cable lugs for item (A) above.	No	10		
	500mm2, 600/1000 Volt, stranded, single core,				
	XLPE insulated copper cables, from the PV				
	System Main Switchboard to the existing Grid	M	203		
	connected low voltage, Switchboard (12 runs of				
_	150m each) including terminations Price per				
<u> </u>	single core cable.				
	Oakla kons for itom (D) akans		-		
-	Cable lugs for item (D) above.	No	3		
	Allow for wiring between the DV modules and the				
\circ	Allow for wiring between the PV modules and the inverter	No	325		
Q	IIIACITA		+		
	Allow for all control cables necessary to		+		
R	complete the linstallation	Sum			
`	Excavate trench for the cables in soft ground,				
	average depth 600mm, lay cable, cover with	М	257		
S	"HATARI" tiles, back-fill and compact.	IVI	257		
	TIATART tiles, back-fill and compact.				
	100 mm UPVC ducts for carrying the cables				
Т	across the road and to have concrete surround	M	11		
	across the road and to have control of same and				
	Allow for suitable mounting racks for the PV				
J	modules	No	325		
Ū					
	Manufacturer's recommended spare parts during	Sum			
V	plant start-up and the first 2 years operation				
	Manufacturer's recommended special tools	Sum			
W	required for maintenance of equipment	Sum			
	All drawings, manuals and instruction books in	Sum			
X	accordance with the specification	Oum			
	Au				
	Allow for 14 days Instruction Period - Training of	Sum			
~	the Employer's personnel in all respects of the				
Y	operation and maintenance of the equipment				
			+		
	The Tenderer is to describe hereunder and price				
7	any other items required to complete the				
<u>Z</u>	installation but are not covered by the bills.				
	_ ,, , , , , , , , , , , , , , , , , ,				
	Excavate for post holes, provide all materials and				
	construct chain link fence (Gauge 12.5g, mesh		200.00		
	size 80mm x80mm, height 8feet) on concrete	M	300.00		
	posts at 3m centre to centre as specified by the				
	engineer including straining posts at every 10th				
	post and additional posts at corners.				
DAGE	2 TOTAL CARRIED TO BULL 4 4 COLL FOTION		-		
	2 TOTAL CARRIED TO BILL 4.4 COLLECTION PAGE				

	BILL 4.4 - PHOTO			OUTSTANDING		
ГЕМ	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
	BILL 4.2 COLLECTION PAGE					
	BILL 4.2 COLLECTION FAGE					
	From Page 1					
	From Page 2					
	_					
			-			
	1					
	<u> </u>					
	_					
	_					
					_	
	BILL 4.4 TOTAL TO SUMMARY PAGE		+			

	BILL NO. 4.5: KAITI WATER SUPF	PLY -SUN	OUTSTANDING						
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE KSHS	AMOUNT KSHS				
	400 m ³ SUMP AT KAITI RIVER								
	EARTHWORKS								
Α	EXCAVATION								
		m³							
i	Excavation in sand to foundation level about 3.0-4.5m deep		831.00						
ii	Trench excavation for gallery pipes up to 200 mm ND 14 m long	m	420.00						
<u>"</u> iii	Excavavation in the rock to foundation about 3.0-4.5m deep	m3	831.00						
 B	FILLING AND COMPACTION	1110	031.00						
i	Compaction of excavated bottom	m²	196.00						
ii	200 mm well compacted hardcore(upgrated to 300mm)	m³	1.00						
—:- iii	Make up levels around the structure	Item	1.00						
	Filter materials on filtration galleries as per the drawings								
	(1200mmx600mm along the filters)	m3	270.00						
С	CONCRETE TO BS 8110								
i	75 mm blinding concrete grade 15 plain concrete	m³	6.00						
	Reinforced Concrete Class 30								
ii	In 400 mm floor slab	m³	122.00						
—:: iii	Ditto in 300 mm sump wall	m³	180.00						
iv	Ditto in 300 mm suspended roof slab	m³	45.00						
٧	Ditto in 300 mm sump entrance	m³	16.00						
	Ditto 300 mm 2 no. beams and support column		17.00						
	FORMWORK								
D	FORMWORK Sawn formwork to edges of curved floor slab width not exc.								
i	0.2m	m²	15.00						
ii	Ditto but for sump base slab	m²	144.00						
iii	Ditto but for sump wall (internal)	m²	146.00						
iv	Ditto but for sump wall (external)	m²	161.00						
٧	Ditto but to edges of roof slab	m²	12.00						
	Ditto but to coffite of augmented roof clab beight 2.5.50 m.	m²	464.00						
vi v	Ditto but to soffits of suspended roof slab height 3.5 - 5.0 m Allow for boxing out for manhole and air vent	Item	164.00 1.00						
<u> </u>	Ditto but for beams and support column	m ²	472.00						
E	Reinforcement to BS 4449 for sump								
i	Mild steel	Kg	3,312.00						
ii	High tensile steel – base slab	Kg	6,960.00						
iii iv	High tensile steel – sump wall High tensile steel – roof slab	Kg Kg	5,400.00 5,400.00						
V	High tensile steel – roof entrance	Kg	1,920.00						
vi	High tensile steel – support column and beams	Kg	4,347.24						
vii	High tensile steel – sump wall (additional)	Kg	7,380.00						
		1							
		ļ							
		 							
		 							
				-					
-									
		1							
		-							
		<u> </u> 							

BILL NO. 4.5: KAITI WATER SUPPLY -SUMP of 400 m ³ RC OUTSTANDING							
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE KSHS	AMOUNT KSHS		
		0	ασ/		7 am Contribution		
	SUNDRIES/FINISHES						
	Install 1 No. internal stainless steel ladder Ditto but stainless external steel ladder	Item Item	Sum Sum				
	Steel manhole cover and frame sealed by low grade	No.	Guiii				
	Concrete Making good offer installation of level indications etc.	Item	1.00				
iv	Making good after installation of level indications etc	Item	Sum				
	SUNDRIES/FINISHES						
	10 mm water proof plaster mix 1:2 in 2 layers to walls internally steel trowelled smooth	m²	256.00				
		_					
	Ditto but in 20 mm thick screed on concrete slab to falls 2 coats flintcote to floor slab	m² m²	140.00 16.00				
	Approved joint sealing compound 20 × 40 mm groove to	m					
	floor slab 2 layers roofing felt on top of wall	m	48.00 16.00				
	20 mm thick cement sand screed mix 1:3 steel floated smooth in falls	m²	164.00				
	provide		.000				
н	SUBMERSIBLE PUMP						
	Supply / commission a submersible pump of capacity 33.33 m³/hr against a head of 160 m to pump to collector tanks at Unoa Hill, 3 phase, 50 Hz, 415 volts, Eff. at least 60%	No.	2.00				
;	Supply, deliver and test a Direct on Line (D.O.L) pump GV1 starter panel with the following controls: phase failure relay; water level relay; ammeter; voltmeter; volts - selector switch; auto – manual switch; isolator; etc.	No.	2.00				
	Supply, deliver and test a 6.0 mm ² 3-core rubber sheathed submersible pump cable with double insulation.	Metre	200.00				
	Supply of 6" class B draw pipes made of galvanized steel. Include piping and fittings to connect to rising main of DN 160 mm	Metre	6.00				
V	Supply of 1.0 mm ² 2 core electrode cable.	Metre	200.00				
	Supply of a set of high/low level electrodes gland nylon type with stainless steel rods.	No.	2.00				
	Supply of 2" Robust (Raw Water) make, or similar & approved, master flow meter 150 mm ND. Include fittings to install the same	No.	1.00				
viii	Supply of mechanical sundries comprising:						
	PAGE 2 TOTAL CARRIED TO BILL 4.5 COLLECTION PAG	<u> </u>			-		

	BILL NO. 4.5: KAITI WATER SUP	PLY -SUI	MP of 400 m ³ F		10
	+			OUTSTANDI	NG
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE KSHS	AMOUNT KSHS
	(a) Pegler 6" non-return valve	No.	2.00		
	(b) Pegler 6" sluice valve	No.	2.00		
	(c) 6" G.I. Flange	No.	6.00		
	(d) 6" G.I. Fabricated pipe clamp	No.	2.00		
	(e) 6" G.I. Nipples	No.	6.00		
	(f) 6" G.I. Bends	No.	6.00		
	(g) 1500 mm manhole cover plate	No.	2.00		
ix	Supply of assorted electrical sundries comprising tapes, saddles, cable glands, junction box, clips, couplings, earth rod and earth cable, etc., all as required to execute the works	Item	Sum		
ı	PIPE WORKS				
i	200 mm ND steel inlet (10m long)	Item	Sum		
ii	200 mm ND steel outlet (10m long)	Item	Sum		
iii	200 mm uPVC 1.2 Mpa screens each 14 m long for infiltration gallery	No.	30.00		
	PIPE WORKS (EXTERNAL)	1			
iv	160 mm uPVC 1.2 MPa	m	6.00		
	160 mm ND double flanged steel pipe with a 50 mm GS	+	0.00		
٧	welded on socket outlet app. 4 m long	No.	1.00		
vi	160 mm double flanged steel pipe 1.5m long in outfall	No.	1.00		
••	100 mm double namged elect pipe 1.0m leng in edital	110.	1.00		
J	BENDS/ELBOWS				
i	160 mm uPVC 90 degrees	No.	1.00		
ii	Ditto 45 degrees	No.	1.00		
iii	160 mm ND GS elbow 90 degrees	No.	1.00		
iv	160 × 160 mm ND steel socketed tee	No.	1.00		
K	OTHER FITTINGS				
i	160 mm ND blank flange	No.	1.00		
ii	Ditto nipples	No.	2.00		
L	VALVE				
-	VALVE				
i	160 mm ND flanged C.I. sluice valve	No.	1.00		
		1			
ii	Allow PC sum of Kshs. 8,000,000 for the construction of Wote WSP's Administration building and associated works.	PC			
		1	1		
		+			
			+		
			+		
			+		
		1			
		1	1		
			1		
			1		
			1		
			1		
		†			
			1		
		1	+		
		 			

	Contract No.: AWSB/AfDB/K BILL NO. 4.5: KAITI WATER SUP			RC OUTSTANDIN	JC.
ITEM	DESCRIPTION	UNIT	QUANTITY		AMOUNT KSHS
		1			
ITEM	BILL NO. 4.5: KAITI WATER SUPPLY -SUMP of 400 m3 R DESCRIPTION	UNIT	QUANTITY	RATE KSHS	AMOUNT KSHS
	BILL 4.5 COLLECTION PAGE	1			7
	From Page 1				
	From Page 2				
	From Page 3				
	BILL 4.5 COLLECTION CARRIED TO WOTE SUMMARY	,			

	BILL NO. 4.6: KAITI WATER S	SUPPLY -Ka	aiti Weir		
TEM	DESCRIPTION	UNIT	QUANTIT Y	RATE KSHS	AMOUNT K
Α	BUSH CLEARANCE				
	clearance shall include demolition and removal of				
	natural and artificial articles, objects and obstructions				
	which are above the original surface. Items for demolition and site clearance shall be deemed to				
	include disposal of materials arising, Items for general				
	clearance include removal of hedges and removal of				
	hedges stumps of any diameter and disposal of				
	materials arising of. Items for removal of trees shall				
	include removal of stumps where required. The girth				
	shall be measured 1m above the ground level.				1
i	General clearance on either side of the river bank to allow for construction of the weir as directed by the	2	20.00		
1	engineer(provisional)	m ²	20.00		
	engineer(provisionar)		+		+
	Cut down trees within 12m2 at either side of river bank				
	at point of weir construction , excavate for, remove and				
ii	dispose roots and all other folonge for trees of girth not	No.	10.00		
	less than 1.5 m at 1.0m from the ground (provisional)				
В	EXCAVATIONS				
D	EXCAVATIONS				
	Excavate material to rock formation . Rate to include				
i	disposal of excess materials as directed by the	LS			
	engineer. Excavations shall include for strutting. Shuttering and		-		-
	keeping excavations free of water bailing out, pumping				
	or other means				
ii	Commencing surface is existing ground level.	m ³	1,653.00		
	Maximum depth 1 - 2 m				
iii	Mariana danta O. E. a.	3	1,136.00		
III	Maximum depth 2 - 5 m Excavation in rock provision (shall be determined on	m ³	1,130.00		+
	site)	m3			
	Excavation ancillaries				
	Preparation of Excavated surfaces to receive				
iv	permanent works materials other than topsoil, rock or	m ²	638.00		
	artificial hard material				
	Disposal of excavated material				
٧	Materials other than rock or artificial hard material	m ³	884.00		
С	IN SITU CONCRETE				
	Provision of concrete, designed mix				1
i	Grade: C20 For use as blinding 20 mm aggregate	m ³	96.00		1
-	Grade C 20/25	III	30.00		+
	For use as structural concrete class 30/20mm	2	000.05		1
ii	aggregates	m ³	960.00		
	Placing of Mass concrete				
	Blinding	3	96.00		+
iiii D	Placing of mass concrete Class 20/20 for blinding IN SITU CONCRETE	m ³	90.00		+
i	Placing of mass concrete class 30/20 aggregates	m ³	960.00		
	Installation of fish ladder in the wier wall	sum	1.00		
	CONCRETE ANCILIARIES				
ii	Frame work: fair finish for entire structuctue	m ²	890.00		
	Reinforcement				
	High yield steel bars to BS 4449 or BS 4461		00.55		
iii	Nominal size 10mm	kg	20.00		

	DILL NO. 4 C. KAITI WATER CURRY V12 W1-		+	-	
	BILL NO. 4.6: KAITI WATER SUPPLY -Kaiti Weir		-		
		1	_		
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE KSHS	AMOUNT KS
	TOTAL BROUGHT FROM PREVIOUS PAGE				
iv	Nominal size 12mm	kg	15,406.00		
٧	Nominal size 20mm (for anchor bars)	kg	20.00		
	Nominal size 25mm	kg	20.00		
vi	Nominal size 16 mm	kg	24,025.00		
Е	MISCELLANEOUS WORK				
i	Allow for works to deal with the flow of water	Item	1.00		
	during construction				
ii	Allow for PC sum for river protection works	Item	1.00		
iii	Allow for drilling of anchor holes in rock for the steel anchor bars (Provisional)	Item	1.00		
	1	1		1	

ITE**	BILL NO. 4.7: UNOA TA					
No.	DESCRIPTION	UNIT	QUANTITY	RATE	(KShs.)	AMOUNT KSHS
G	CONCRETE ACCESSORIES					
Н	PIPE & PIPE FITTINGS - SUPPLY					
i	Drain uPVC Pipes, Class C, 90 mm dia	m	24			
			-			
ı	Fittings to Welded Steel pipes					
	GI PIPES Bends					
i	80 mm diameter GI long radius 90 degrees bends.	nr	2			
ii i	160 mm diameter GI long radius 90 degrees bends.	nr	2			
	80mm diameter 45 degrees double flenged bend	nr	1 1			
	160mmDouble Flanged Short radius bend	nr	1			
	Flanged Beat Equilibrium Float Valve	nr	1			
	Tapers					
iii	150 x 100 mm dia. Gl taper	nr	2			
	80x50 mm Double flanged taper	nr	1			
	Adaptors and couplings					
iv	160 mm diameter upvc/GI adaptor	nr	4			
V	80 mm dia PVC adaptor Type A2 (flanged adaptors)	nr	2			
	Flanged Adoptors		4			
	160mm Flanged Adoptors Pipe pieces and bellmouths	nr	4			
vi	160mm plain ended GI pipe length 1m	nr	1			
vi	160mm plain ended gippe length 1m	nr nr	1			
vii	160mm GI pipe length 2.5m (cut to suit)	nr	1			
viii	160mm GI pipe length 2.5m (cut to suit)	nr	1 1			
ix	160mm GI pipe length 1.5m	nr	1			
Х	160mm GI pipe length 1.5m	nr	1			
хi	160mm dia GI bellmouth(single Flanged)	nr	1			
xii	160mm dia Blind Flange	nr	1			
xiii	160mm diameter Single Flenged pipe with paddle flange 500mm	nr	1			
	from one end (Length 2.1m)					
xiv	80x50 All Flanged Tees	nr	1			
XV	80mm Single fledged pipe with paddle flange (0.4m Length) Single Flanged pipe with Beveled End (Length 1.5m)	nr	1			
xvi	80mm Single Flanged pipe with beveled End (Length 1.5m) 80mm Single Flanged pipe with paddle flange 450mm from Plain	nr	'			
xvii	End	nr	1			
	Single Flanged pipe					
xviii	80mm single flanged pipe (Length 1.5m)	nr	1			
xix	160mm Single Flanged pipe with central paddle flange (length 0.6m)	nr	1			
XIX	,	nr	1			
XX	80mm Single flanged pipe	nr	1			
xxi 	160mm Single Flanged pipe (length 1m)	nr	2			
xxii	160mm Single Flanged pipe (Length 2.5m)	nr	1			
xxiii	160mm Single flanged Steel pipe (Length 1m)	nr	1			
J	Valves, Penstocks, Hydrants, Meters Gate valves		+			
i	100 mm dia. Double flanged gate valve	nr	1			
i	150 mm dia. Double flanged gate valve	nr	1 1			
iii	150mm dia Woltman bulk water meter	nr	1			
iv	160mm and 80mm dia All Flanged Gate Valve	nr	2			
	PIPEWORK				· ·	
K	PIPEWORK - CHAMBERS AND PIPEWORK ANCILLARIES					
i	Gate valve chamber, size 1800 x 1800 mm internal dimensions , depth n.e 1.0m	nr	1			
ii	Bulk water meter chamber, size 900 x 900 mm internal dimensions,	nr	1			1
II	depth an.e 1.0m	nr	1			
iii	Overflow/Washout valve chamber size 900x900mm internal dimensions depth n.e. 1.0 m.	nr	1			
	PAGE 1 TOTAL CARRIED TO BILL 4.7 COLLECTION PAGE		+	1		

EM	DESCRIPTION	UNIT	QUANTITY	RATE	(KShs.)	AMOUNT KSHS
0.	PIPEWORK - SUPPORTS AND PROTECTION,				• •	
	ANCILLARIES TO LAYING AND EXCAVATION					
i	Extras to excavate and backfilling, excavation of Class II material.	m³	23			
	Compared Class 45/00 in Charle and Thurst Blacks					
	Concrete Class 15/20 in Stools and Thrust Blocks					
ii	Nominal bore n.e 200 mm; volume 0.2 - 0.5 m³	nr	5			
 М	MISCELLANEOUS METALWORK					
VI	Rate to include supply and fixing and inclusive of foundations where					
	applicable.					
	Galvanised mild steel internal ladders with stringers returned to form					
İ	handrails	m	1			
ii	Galvanised mild steel external ladders with stringers returned to	m	1			
	form handrails					
ii	Lockable mild steel sheet metal covers for access manholes	nr	4			
iv	Step irons.	nr	20			
N	BRICKWORK, BLOCKWORK & MASONRY Dense concrete blockwork					
i	150 x 225mm composite construction in vertical curved walls	m²	10			
<u> </u>	130 X 22311111 Composite Construction in Vertical Curved Walls		10			
ii	150 x 300mm composite construction in vertical curved walls	m²	15			
<u></u>	100 X 00011111 00111posite constituation in voltaci curved wallo		10			
iii	225 x 225mm composite construction in vertical curved walls	m²	10			
	1200X375MM COMPOSITE CONSTRUCTION VERTICAL WALLS	m²	36.5			
	1200/3/3000 COMPOSITE CONSTRUCTION VERTICAL WALLS	111	30.3			
	1500X225MM COMPOSITE CONSTRUCTION VERTICAL WALLS	m²	45.3			
	Blockwork ancillaries					
iv	Joint reinforcement using 10mm thick 1:2 cement sand mortar with 10mm dia bars at the center in every course	m	400			
0	PAINTING					
i	Bituminous paint on masonry to grove formed from cement sand	m²	4			
ı	mortar at the bottom of the wall	111	4			
	Provide water paint on masonry tank walls		96.6			
P P1	WATERPROOFING Down proofing					
	Damp proofing					
i	Using rendering in ordinary cement mortar of curved walls	m²	95.6			
ii	provide 25mm render on internal and external walls with water proof	m²	95.6			
Q	cement MISCELLANEOUS WORK					
i	Provide and fix vent pipes	nr	3			
•						
	Stelilization and water tightness testing	nr	1			

	BILL NO. 4.7: UNOA TANK 150 m3									
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	(KShs.)	AMOUNT KSHS				
	BILL 4.7 COLLECTION PAGE									
	From page 1					_				
	From page 1					-				
	From page 2					-				
	BILL 4.7 COLLECTION CARRIED TO WOTE SUMMAR	Υ				-				

				1	ı
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs
	CLASS A: GENERAL ITEMS				
	Specified Requirements				
	<u>Testing of works</u>				
	Carry out pressure testing, cleansing and sterilising of the pipeline in accordance				
	with clauses 440 and 441 of the specification.				
1260.1	Pipe bore n.e 400mm	m	5,400		
			,		
	CLASS I: PIPEWORK - PIPES				
	Supply and Transport to site. Transport from site store, lay and joint pipes in trench, include for excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation and backfilling. Note:- Trench width and minimum cover to pipes is as per the Specifications. The cost shall include for strutting, shuttering, stabilizing the earth faces of trenches and keeping the trenches free of water from whatever source by pumping or other means and cost of use of selected soil from the excavated material for compaction in bed and surround to backfilling of trenches, all as specified.				
	PIPEWORKS				
	GI PIPES				
	Supply, deliver and instal the following GI pipes double flanged as directed by the engineer,the price should include anchorage, Connection details and asociated fittings				
1433	DN 160 mm PN 20 for river and road crossings, first 200m, and last 20m to the tank	m	250		
	CLASS J: PIPEWORK - FITTINGS AND VALVES				
	All Fittings to PN 20. Butt fusion fittings for DN 160 and above while Compression fittings for DN90 and below. Rate to include for all Steel-HDPE connection fittings where applicable.				
	Supply, Handle, deliver to site, fix in place and test inclusive of all fittings, including flanged tees and steel fittings, steel pipes inclusive as per drawing noRate to exclude construction of chambers				
	DN 160 Pipeline DN50 Single Small orifice air valve	No.	4		
	Valves and Washouts Supply, handle, deliver to site, fix in place and test inclusive of all fittings, including flanged tees, saddle clamp, nipples and steel fittings, steel pipes inclusive (rate to exclude construction of chambers).				
	Wash out Valve (50mm opening) on DN 160mm	No.	4		
	Non -return valve, DN 150mm PN 20	No.	1		
	BENDS Supply, handle, deliver to site, fix in place and test inclusive of all fittings bends as directed by the Engineer. For:				
	Bends 90 ⁰				
612.1	Dia 160mm	No	4		
	Reducers				
	Supply, handlind, fixing in place and testing inclusive of all fittings for DN160x110mm reducers				
	Ditto but for DN160x110	No	1		
	Water Meters		,		
381.7	Ditto but DN150mm-Woltmann zonal bulk water meters CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES	No	1		
	Chambers Supply and deliver materials on site, excavate for a construct complete chambers				
	including precast concrete cover slabs where necessary as shown on the drawing				
	Provide all materials and construct WASHOUT chambers internal dimensions 1400mm x 1400mm. Include for supply and fixing of lockable concrete cover and step irons, as per drawing				
K231	Depth: not exceeding 3 m	No	4		
	PAGE 1 TOTAL CARRIED TO BILL 4.8 COLECTION PAGE	 			

	Bill No. 4.8 KAITI WATER TRANSMISSION	N MAIN			
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
IIEW	Provide all materials and construct CONTROL VALVE chambers internal	UNII	QII	RAIE (Noils)	AWOUNT (KSIIS)
	dimensions 1000mm x 1000mm. Include for supply and fixing of lockable cover				
K232	Depth: not exceeding 3 m	No	3		_
	Provide all materials and construct AIR VALVE chambers internal dimensions				
	1000mm x 1000mm. Include for supply and fixing of lockable cover and step irons, as detailed in drawing				
K234	Depth: Not exceeding 3m	Nr.	4		-
	Reinstatement				
K732	Breaking up, temporary and permanent reinstatement of dirt roads Pipe norminal bore n.e. 300mm	m	90		_
K/32	·	m	90		-
K732.2	Breaking up, temporary and permanent reinstatement of tarmac, concrete or concrete blocks surfaced driveways, pipe nom. bore n.e. 300 mm. (Provisional)	m	50		
	River crossing				
3k61	River crossing River crossings width not exceeding 20m, including all coupling, reinforced	nr	2		_
	concrete piers, surrounding, bearings, including extra protection works etc as per standard drawings				
	Other Pipework Ancillaries	1			
	Pipe markers shall be made from reinforced precast concrete to detail. This item				
	shall be deemed to include supply and fixing the pipe markers and painting as				
K820.1	Pipeline marker posts	nr	23		-
K820.2	Air valve marker posts	nr	3		-
K820.3	Washout marker posts	nr	3		-
K820.4	Sluice Valve marker posts	nr	1		-
	CLASS L: PIPEWORK – SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION				
	Surround with class C15/20 mass concrete, pipe bore n.e 400mm for road, river and stream crossing	m3	12		-
L111	Excavation in trench for rock (Provisional)	m ³	360		-
	Bedding Material				
L321	In pipe trenches bedding in rocky areas with selected imported class S2 material. Pipe n.b. n.e. 300 mm (Provisional)	m ³	230		
	Concrete stools and thrust blocks				
L78	Provide and place mass concrete (1:3:6) for anchor blocks in bends etc Rate to include excavation and necessary formwork (provisional)	m ³	4		-
1.704		NI:	0		
L781	Provide and place single flanged GI pipe pieces for joining the air valves, control valves and wash out valves	Nr.	9		-
L782	Provide and install VJ couplings for joining GI to HDPE pipes	Nr.	12		-
L783	DN 150mm flanged adaptor for the fittings inside each chamber	Nr.	12		-
		-			

ITEM DESCR BILL C From p From p			SMISSION MAIN				
	RIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)		
	COLLECTION	ONIT	QII	KATE (KOIIS)	AWOUNT (NOIS)		
From p							
From p	page 1				-		
	page 2				-		
	<u> </u>				ĺ		
					ĺ		
					<u> </u>		
					<u> </u>		
					<u> </u>		
					 		
					i		
					ĺ		
					<u> </u>		
					<u> </u>		
					<u> </u>		
					<u> </u>		
					<u> </u>		
BILL 4.8	.8 COLLECTION CARRIED TO GRAND SUMMARY				-		

	BILL 4.9: KAITI WATER DISTRIBUTION PIPELINE									
ITEM	DESCRIPTION	UNIT	QUANTIT Y	RATE (KSh)	AMOUNT (KSh)					
Α	CLASS A: GENERAL ITEM									
A26	Testing of works									
A26.1	Pipeline testing and commissioning for the whole work on this line, including all necessary equipment, materials and works necessary for testing, such as thrust blocks, anchor blocks, transportation and use of water, pipe fittings, disposal of used water.	m	20,000.00							
A11.1.2	Disinfection of Pipe lines: flushing with clear water, filling with water containing 0.05 g/l calcium hypochlorite, left for 24 hours. This includes supply of all necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified.	m	20,000.00							
J	CLASS J: PIPE WORK - FITTINGS AND VALVES									
	Supply, Laying and Jointing									
	Supply, transport to site, transport from site store, lay, joint and test.									
J.1	Provisional Sum for Supply of fittings and Valves to be determined during construction works with the Supervision Team in Conjuction with the Winning Tenderer to be expended as directed by the Project Manager	Sum			-					
	HDPE Reducers, PN 16									
	DN 160x110mm DN 110x63mm	No.	2							
	HDPE Tees, PN 16	NO.								
	DN 160x110mm	No.	5							
	DN 110x160mm	No.	2							
	DN 160x63mm	No.	8							
	DN 110x63mm HDPE End Caps, PN 16	No.	6							
	DN 110mm	No.	5							
	DN 63mm	No.	6							
K	CLASS K: PIPE WORK - CHAMBERS AND PIPE WORK ANCILLARIES									
	Chambers, ducts, culverts, crossings, thrust and anchor blocks, reinstatement and others as listed and specified in drawings.									
	Note:- 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, 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.									
K1	Excavate for, provide all materials and construct complete inline valve chamber. Internal dimensions 1000mm x 1000 mm. Base slab to be 125 mm thick reinforced concrete and including cover slab of reinforced concrete. Rate to include for all thrust blocks, pipe supports, inspection covers etc as detailed in the drawings. Provide and place mass concrete grade 15 at outfalls to washouts including for all shuttering required as directed by the Resident Engineer.									
1/0	Construction Chamban and Bires of AV 1400 C 15		40							
K2	Construction Chambers and Pipes of AVs, WOs, Section Valves	nr	40		-					
				-						
-	Total corried forward to the next need									
	Total carried forward to the next page				-					

	BILL 4.9: KAITI WATER DISTRIBU	ITION PII	PELINE		
ITEM	DESCRIPTION Total brought From the previous page	UNIT	QUANTITY	RATE (KSh)	AMOUNT (KSh)
	K6 - Crossings & Reinstatements				-
	No crossings a remodelements				
	Notes them of an example to their store at all to about				
	Note:- Items for work in this class shall include: Excavation, boring, preparation of surfaces, disposal of				
	excavated material, shoring sides of excavation, backfilling and				
	removal of redundant services, reinstatement.				
	- Concrete, reinforcement, formwork, joints and finishes, sleeves,				
	and diversion works.				
	- Tips for disposal of excavated material or debris to be identified				
	by the Contractor in liaison with the Local Authority.				
K611	River crossings length 1-3m	nr	20.00		
	Ditto 3-10m	nr	10.00		
K631	Ditto exceeding 10m	nr	6.00		
	Crossings				
	Roads crossings micro turnelling for tarmarked roads	m	60.00		
	Roads crossings for gravel and earth roads	m	200.00		
	Hedge crossing, pipe bore not exc. 300mm Fence crossings, pipe bore not exc. 300mm	nr nr	300.00 300.00		
	Sewer or drain crossings, pipe bore not exc. 300mm	nr	100.00		
	Wall crossings, pipe bore not exc. 300mm	nr	200.00		
	Other underground services, pipe bore not exc. 300mm	nr	200.00		
	Reinstatement				
	Pipe bore: not exceeding 300 mm on gravel roads	m	350.00		
K8	Other Ancillaries				
	Supply and fix marker posts for water main route, road crossings, change of direction, air valves, washouts, fire				
	hydrants and valve chambers. All in accordance with				
	drawings and specifications Washouts, inscribe WO, Sluice				
	Valves, inscribe SV, Air Valves, Inscribe AV, Pipeline,				
	inscribe as appropriate or as directed by the Resident				
	Engineer				
K9	Marker posts	nr	200.00		
	CLASS L:- PIPEWORK - SUPPORTS AND PROTECTION,				
L	ANCILLARIES TO LAYING AND EXCAVATION				
	Extras to Excavation and Backfilling (Provisional)				
L111	Excavation in trench for rock	m³	500.00		
	Note:- Blasting is NOT permitted for Item L11				
	Concrete Support, Thrust Blocks and Anchor Blocks				
	Thrust blocks for bends and anchor blocks volume 0.1-				
	0.2m3				
L722	To pipes nominal bore: 200-300 mm	nr	100.00		
				_	
				_	
	Total carried forward to the next page				-

TEM	DESCRIPTION	UNIT		<u> </u>
	Total brought From the previous page Last Mile Household Connections			
1	It is estimated that the approximate number of Consumer Connections to be carried out in the area is 500. The connection works are to be carried out in liason with with the respective WSP, who will receive, process and approve the applications for connections before submitting them to the Contractor.			
	Supply, Transport to site and hand over to Purchaser's Representative / WSP Store, DN 15mm Consumer Water Meters (Plastic Encased), Kent or approved equivalent; conforming to the given Technical Specifications with the neccessary fittings and accessories and Connect the 500 Water Metres to the Consumer, Rate to Include delivery (transport), connection charges, testing and Commisioning of the work	nr	500.00	

	BILL No. 4.10 - CHLORINE HOUSE AND O	PERATOR	'S HOUSE		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	CLASS E: EARTHWORKS	2			
E411	Excavation of surfaces to reduce the level depth not exc. 0.25 m	m ²	72.00		-
E312	Excavate for Foundations and bases for depth 0.25 - 0.5m	m ³	36.00		-
E313	Foundations and bases for depth 0.5 - 1.5 m	m ³	144.00		-
	Extra Over Excavation in Any Position for:-				
E333	Excavating in rock Class "A"	m^3	2.00		-
	Excavation Ancillaries				
E512	Trimming of excavated surfaces to receive blinding concrete	m ²	72.00		-
	Filling as Described:-Include for compaction as specified				
	Approved Material as Described:-				
F614.1	Provide approved materials selected form excavated material other than top soil	m ³	86.00		-
	<u>Hard-core</u>				
F615	300 mm thick well compacted hard core	m ³	29.00		-
F615	50 mm stone dust blinding	m ³	3.60		_
	Anti-Termite treatment		0.00		
W500	Treat surface of hardcore with approved anti termite solution applied strictly in accordance with the manufacturers instructions	m²	80.00		_
	Damp-Proof Membrane				
W131	1000 Gauge polythene sheeting, laid over hard-core in two layers	m ²	72.00		-
	CLASS F: INSITU CONCRETE:				
	Mass Concrete Class 15/20mm :-				
F511	50mm Thick blinding under foundation footing, column bases	m ³	3.60		
			0.00		
	Reinforced Concrete Class 25/20mm:-				
	200 x 450 mm ring beam concrete	m ³	4.27		-
F622.3	200x200 mm reinforced concrete columns	m ³	5.33		-
F622.4	150 mm thick reinforced concrete slab	m ³	12.00		-
				 	
		-			
				+	
				+	
				<u> </u>	
				+	
				+	
				†	
				<u> </u>	
		1		1	
PA	AGE 1 TOTAL CARRIED TO BILL 4.10 COLLECTION SHEET				-

	BILL No. 4.10 - CHLORINE HOUSE AND O	PERAIUR	S HOUSE		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL No. 4.10 - CHLORINE HOUSE AND O	PERATOR	S HOUSE		
	CLASS G: CONCRETE ANCILLARIES				
	<u>Formwork</u>				
	Provide and Fix Shuttering Including Propping, Strutting and				
	Striking, all as Specified				
	Formwork - Rough Finish:-				
G143	Vertical sides columns below the ground level	m^2	11.89		
	Formwork - Fair Finish:-				
G213.1	Vertical Sides of the columns	m^2	20.80		
	Vertical sides of ring beam	m ²	32.00		
	Reinforcement		02.00		
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 Including Cutting, Bending, Propping with Spacers and Tying as Specified :-				
G522	8 mm diameter	ka	170.00		
G522 G523	10 mm diameter	kg kg	275.00	+	
	12 mm diameter	kg kg	290.00	+	
G5245	16 mm diameter	kg	0.00	+	
JJ240		кy	0.00	+	
	Fabric Reinforcement No. A142 Mesh Size 150 x 150mm				
	Weighing 2.22 kgs Per m ² , Including Bends, Tying Wire and Distance Blocks:-				
G561	Fabric reinforcement with minimum 150mm wide side and end laps, laid in bed- A142 mesh at 25mm from the top	m ²	72.00		
	Concrete Accessories	•			
G812	Trowel finish of top surfaces	m^2	72.00		
	CLASS U: BRICKWORK, BLOCKWORK AND MASONRY Walling.				
	Natural Otana Malling Madisus Object Duraned Deinford durit				
	Natural Stone Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at Every Two Course, and Bedded, Jointed and Pointed in Cement Mortar (1:3):-				
	Substructure Walling				
U821	205 mans think stone massage well in athin form dation	m ²	72.00		
	1 225 mm thick stone masonry wall in strip loundation			 	
	225 mm thick stone masonry wall in strip foundation	111			
	Structure Walling		252.02		
U811		m ²	252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		
	Structure Walling		252.02		

Bits U782 200 Fir G812.1 515 wo G813 Pre wa 12 or: G812.2 Inte Ext CE G812.3 Pro CL	BILL No. 4.10 - CHLORINE HOUSE AND O amp-Proof Course: ituminous Felt Damp-Proof Course as Described:- Domm Wide under walls inishes Tomm Cement and sand (1:4) render to plinth walls, finished with a cood float repare and apply two coats of bituminous paint on rendered plinth alls //all Finishes 2 mm Lime plaster : steel trowelled finish : on concrete, blockwork r stonework : to tternal walls xtrernal walls EILING FINISHES	m m ² m ²	QTY S HOUSE 47.55 47.55	RATE (KShs)	AMOUNT (KShs)
U782 200 Fir G812.1 51 wo G813 Wa 12 or s G812.2 Inte Ext CE G812.3 Pro CL	amp-Proof Course: ituminous Felt Damp-Proof Course as Described:- Domm Wide under walls inishes Somm Cement and sand (1:4) render to plinth walls, finished with a cood float repare and apply two coats of bituminous paint on rendered plinth alls //all Finishes 2 mm Lime plaster : steel trowelled finish : on concrete, blockwork of stonework : to iternal walls xtrernal walls	m m ² m ²	47.55		-
U782 200 Fir G812.1 51 wo G813 Wa 12 or s G812.2 Inte Ext CE G812.3 Pro CL	ituminous Felt Damp-Proof Course as Described:- Domm Wide under walls inishes 5mm Cement and sand (1:4) render to plinth walls, finished with a cood float repare and apply two coats of bituminous paint on rendered plinth alls Vall Finishes 2 mm Lime plaster : steel trowelled finish : on concrete, blockwork restonework : to iternal walls extremal walls	m ² m ² m ²	47.55		- -
U782 200 Fir G812.1 151 wo G813 Wa Wa 12 or : G812.2 Inte Ext CE G812.3 Pro	00mm Wide under walls inishes 5mm Cement and sand (1:4) render to plinth walls, finished with a ood float repare and apply two coats of bituminous paint on rendered plinth alls //all Finishes 2 mm Lime plaster : steel trowelled finish : on concrete, blockwork restonework : to iternal walls xtrernal walls	m ² m ² m ²	47.55		-
G812.1 15i wo Wa Wa	inishes 5mm Cement and sand (1:4) render to plinth walls, finished with a cood float repare and apply two coats of bituminous paint on rendered plinth alls /all Finishes 2 mm Lime plaster : steel trowelled finish : on concrete, blockwork restonework : to iternal walls xtrernal walls	m ² m ² m ²	47.55		-
G812.1 15i wo Wa Wa	inishes 5mm Cement and sand (1:4) render to plinth walls, finished with a cood float repare and apply two coats of bituminous paint on rendered plinth alls /all Finishes 2 mm Lime plaster : steel trowelled finish : on concrete, blockwork restonework : to iternal walls xtrernal walls	m ² m ² m ²	47.55		
G813 Wo Wa Wa Wa G812.2 Interest CE G812.3 Pro-	ood float repare and apply two coats of bituminous paint on rendered plinth alls /all Finishes 2 mm Lime plaster : steel trowelled finish : on concrete, blockwork r stonework : to iternal walls xtrernal walls	m ²			-
G813. wa Wa 12 or: G812.2 Inte Ext CE G812.3 Pro CL	alls /all Finishes 2 mm Lime plaster : steel trowelled finish : on concrete, blockwork r stonework : to Iternal walls xtrernal walls	m ²	47.55		
G812.2 Inte	2 mm Lime plaster : steel trowelled finish : on concrete, blockwork r stonework : to sternal walls xtrernal walls				
G812.2 Inte	<u>r stonework : to</u> ternal walls xtrernal walls			1	
G812.2 Into Ext CE CE G812.3 Pro CL	ternal walls xtrernal walls				
CE Ce Ce Cr Cr Cr Cr Cr Cr			252.02		_
G812.3 Pro	EILING FINISHES	m2	252.02		_
G812.3 Pro					
G812.3 Pro	elotex ceilings with plastic distemper painting			1	
CL	rovide ceilings and distember painting	m ²	70.00	†	
<u>R</u> o	LASS O: TIMBER				
	oofing				
O213.1 50	0 x 150 mm rafters and tie beams in trusses	m	81.00		
	5 x 50 mm battens	m	165.00		-
O213.3 100	00 x 50 mm struts and ties	m	96.00		-
	0 x 100 mm wall plate fixed to concrete with approved bolts at				
	000 mm centres	m	33.00		-
	0 x 100 mm purlins	m	108.00		
0040 0 00			40.00		
	00 x 25 mm Fascia Board teel angle cleats 50 x 25 x 100mm - 3mm thick	m nr	40.00 84.00		
14210.1 000	tool angle cleate 50 x 25 x 100mm - 5mm thick	111	04.00		
	6mm diameter high density rag bolt 150mm long built into beam:				
N210.2 inc	cluding nut and washer	nr	250.00		
Cla	ladding				
	4 gauge IT5 sheeting	m ²	100.00		-
	idge cap	m	50.00		-
-					_
				†	
				<u> </u>	
				 	
				†	
				1	
				+	
				†	
B	E 3 TOTAL CARRIED TO BILL 4.10 COLLECTION SHEET				_

	BILL No. 4.10 - CHLORINE HOUSE AND C	PERATOR'	S HOUSE		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL No. 4.10 - CHLORINE HOUSE AND C	PERATOR'	S HOUSE		
7004.4	1000 v 1500 remented accomment with days with smills		4.00		
Z321.1	1000 x 1500 mm steel casement windows with grills	nr	4.00		
Z321.2	600 x 800 mm steel casement windows with grills	nr	1.00		
Z321.3	600 x 800 mm steel casement windows to washrooms with grills	nr	2.00		-
Z313.1	Wooden flush doors, size 900mm x 2100 mm high	nr	5.00		
	Steel External Doors				
Z323	900 x 2400 mm high single leaf	nr	3.00		-
	Toilet Cubicle doors				
Z313.2	Wooden flush doors, size 800mm x 2100 mm high	nr	2.00		-
	Supply and fix the following ironmongery as per "Assa Abloy" catalogue to Engineers approval; to timber; with matching screws				
Z313.3	100 mm Brass butt hinges Pairs	nr	16.00		-
Z313.4	Dubbar door stops	nr	8.00		
Z313.4 Z313.5	Rubber door stops 5 lever system Multi lock complete with handles	nr nr	3.00		-
Z313.6	Two lever mortice lock with handles	nr	4.00		-
Z313.7	150 mm Brass barrel bolt Ceiling	nr	8.00		-
	12mm thick approved chipboard to BS 2604, Part 2, density 480-640kgs, per square meter 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				
O213.6	Horizontal ceiling fixed to underside of trusses	m ²	72.00		-
O213.6	12 mm cornice 50mm high, plugged	m	80.00		
02.0.0			00.00		
	CLASSV: PAINTING				
	Prepare and Apply Three Coats Exterior Quality Plastic Emulsion Paint:-(Provisional)				
V543	Fair-faced concrete surfaces, externally and internally	m ²	756.05		
7010	The state of the s		700.00		

	BILL No. 4.10 - CHLORINE HOUSE AND C	PERATOR'	S HOUSE		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL No. 4.10 - CHLORINE HOUSE AND C PLUMBING AND SANITARY WORKS	PERATOR'	S HOUSE		
X921.1	12.5mm Diameter class B GI pipes and fittings	SUM	1.00		-
X921.2	Allow for other fiitings e.g gate valves, flexible	SUM	1.00		-
X921.3	Twyford or equivalent wash hand basin size 450 x 300 mm complete with chromium plate taps and chained plastic plug.	nr	1.00		-
X921.4	Twyford or equivalent vitreous china low level pedestal WC suite complete with 9-10litres plastic cistern , P trap, black heavy duty set & cover, cover flush pipe and all necessary accessories.	nr	1.00		-
X921.5	600 x 600 mm beveled edge polished plate glass mirrors and field packing including fixing with chromium plated dove nuts and brass screws.	nr	1.00		-
X921.6	750 litre overhead tank	nr	1.00		
7.521.0					
X921.7	100mm Diameter PVC soil pipe class B, include all necessary fittings.	m	25.00		-
X921.8	Ditto but 150mm Dia	m	40.00		-
X921.9	Ditto but 40mm Dia	m	25.00		-
X921.10	Allow for fittings and accessories for above	SUM	1.00		-
X921.11	Construct 800 x 800mm x 1200mm deep inspection manholes, plaster internal faces and provide heavy duty manhole covers.	nr	2.00		-
X921.12	Allow for 20mm dia GI pipework for the shower	SUM	1.00		-
X921.13	Supply and fix ceramic type soap dish	nr	1.00		-
X921.14	Supply and fix tissue paper holder	nr	1.00		-
	ELECTRICAL WORKS				
X931.1	Laying conduits, wiring works, fixing fittings, testing and commissioning works:-	SUM	1.00		-
·					
B.4	CE L TOTAL CARRIED TO RULL 440 COLL FOTION OUTET				
PA	GE 5 TOTAL CARRIED TO BILL 4.10 COLLECTION SHEET		1		-

	BILL No. 4.10 - CHLORINE HOUSE AND C	PERATOR'	S HOUSE		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL No. 4.10 - CHLORINE HOUSE AND OF Fix electical fittings which include the following schedule:	PERATOR'	S HOUSE		
	The electical littings which include the following schedule.				
	(i) ALL ROOMS - 2 No twin sockets, 1No spherical screw neck				
X931.2	fitting & 1No twin switch;	nr	10.00		
X931.6	(v) Toilet - 2 No covered bulb, 1No switch;	nr	4.00		
X931.7	(vi) General areas - 1 No bulb fitting;	nr	1.00		
X931.8	(vi) Store - 1 No covered bulb, 1 No twin switch;	nr	2.00		
X931.9	(vii) External areas - 2 No bulb fittings with protection cover	nr	2.00		
(004.40			4.00		
(931.10	(viii) SPN consumerer Unit	nr	1.00		
	Pressurised solution feeder, constant level tank with inlet				
(931.10	connector, repentor, outer funnel and 50 mm tubing for outlet.				
	Includes valves and chemical reinstant tubing. Flow upto 15 ml/s.	no	1.00		
	SEPTIC TANK AND SOAK-AWAY				
	PLUMBING, FITTING AND FINIEHING WORKS				
X921	Supply and install 600mm x 600m x 500 fibre water tank as directed by Engeneer.	nr	1		_
	Allow for painting of the water tank with 25mm block paint shelf				
V533.2	paint finish	m³	11		-
	SEPTIC TANK				
X931.1	Strip the site for the septic tank of all vagetation, trees stumps and shrubs for depth not exceeding 200mm	m²	303.7		-
	Excavation in natural earth for the foundation as directed for the				
E411.2	septic tank	m³	36		-
		-			
PA	GE 6 TOTAL CARRIED TO BILL 4.10 COLLECTION SHEET	1			

	BILL No. 4.10 - CHLORINE HOUSE AND C	PERATOR'	S HOUSE		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	BILL No. 4.10 - CHLORINE HOUSE AND (Allow for placement of class 15 blinding concrete 50mm thick tank	OPERATOR'	S HOUSE		
F511.2	floor as indicated in drawings	m³	2		-
F242	Allow for placement of class 20 concrete 200mm thick septic tank floor as indicated in drawings	m³	2		-
F622.2	Allow for placement of class 25 reinforced concrete in septic tank walls, inlet, outlet base slabs, 200mm thick. Include for all formwork.	m³	6		-
F622.3	Allow for supply of material and casting of class 25 reinforeced concrete slab for the septic tank as specified and directed by the Engineer. Include for all formwork	m³	2		-
	provide reinforcement in the 100mm thick baffle walles as				
F622.4	indicated in the drawing	kg	350		-
K851.1	Allow for manholes, installation of stainless steel frames and manhole covers as shown in drawings and directed by Engineer	nr	4		-
K851.2	Allow for construction of the vent pipes, inlet and outlet pipe connections. Allow for the construction of the reinforced 100mm thick baffle wall	sum	1		-
K132	Allow for construction of the manholes, depths not exceeding 1.5m as shown by the Engineer	sum	1		-
E324	Allow for trench excavation depth not exceeding 1.5m, supply and laying DN 200mm UPVC sewer/foul water pipeline. Allow for connecting to the septic tank and testing.	m	300		
G561	Supply and install Fabric A142 mesh	m²	6.8		
U121	Blockwork & Masonry for Septic Tank Walls and Inspection Manholes	m²	51.79		-
W261	12mm water proofed cement rendering as per drawings	m²	53.5		-
G524	Supply and install steel reinforcement bars for the septic tank and inspection manholes as indicated in the drawings	kg	350.3		-
	SOAKAWAY PIT				
2	CLASS E: EARTHWORKS				
2.1	Excavate in bulk for circular soak away pit, depth not exceeding 1.0m commencing from existing ground surface	m ³	1.00		-
-					
	CE 7 TOTAL CARRIED TO BULL 4 40 COLL FOTION OUTER				
PA	GE 7 TOTAL CARRIED TO BILL 4.10 COLLECTION SHEET		l		-

	BILL No. 4.10 - CHLORINE HOUSE AND C	PERATOR	S HOUSE		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
0.0	BILL No. 4.10 - CHLORINE HOUSE AND C			1 1	
2.2	Ditto but depth range 1-2m	m ³	1.00		-
			4.00		
2.3	Excavation in roak (provisional sum) to 6m		1.00		
	Filling				
2.4	Filling to completed structures including compaction as specified				
	Timing to completed education including compaction as specifical				
2.5	Selected excavated material other than topsoil, rock or artificial hard material top 300 mm	m ³	1.00		-
2.6	Approved hardcore fill soak away pit 3 m deep	m ³	3.00		-
	Form work				
	Provide form work for the soak pit	m2	8.00	+	
	Concrete	1112	0.00		
2.7	Supply concrete for the 200mm masonry	m3	0.13		-
	Supply mass concrete at the bottom of the masonry (Class 15)	m3	1.30	Ţ	-
2.8	Supply concrete for the ten cover eleb	m?	0.20	+	
∠.0	Supply concrete for the top cover slab	m3	0.20		-
2.9	Supply bricks for masonry wall	m3	3.00	 	_
	Cappi, shore in macerily main		0.00		
	Reanforcement				
2.1	Provide steel reinforcement bars (y8)	kg	86.00		-
	provide steel reinforcement bars (y10)	kg	54.00		-
	provide steet reinforcement bars (y12)	kg	100.00		-
0.44	Pipework Provide PM400 and the second for the seco		20.00		
2.11	Provide DN160mm pipework from septic tank to soak away pit	m N=	30.00		
2.12	Privide UPVC manhole cover(600mmx450mm)	Nr.	1.00		-
		1	1		
				 	
			1		
			-		
		1	1	+	
			-	+	
				+	
	AGE 8 TOTAL CARRIED TO BILL 4.10 COLLECTION SHEET	î .	1	1	

	BILL No. 4.10 - CHLORINE HOUSE AND	OPERATOR	'S HOUSE		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
BIL	L No. 4.10 - CHLORINE HOUSE AND OPERATOR'S HOUSE				
					AMOUNT
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	(KShs)
	BILL No. 4.10 COLLECTION PAGE				
	PAGE 1 TOTAL				-
	PAGE 2 TOTAL				
	PAGE 3 TOTAL				-
	PAGE 4 TOTAL				-
	PAGE 5 TOTAL				-
	PAGE 6 TOTAL				-
	PAGE 7 TOTAL				-
	PAGE 8 TOTAL				-
	BILL 4.10 BILL TOTAL TAKEN TO BILL SUMMARY PAGE				
	DILL T. IV DILL TOTAL TAKEN TO DILL SUNINAKT PAGE	1	ļ	1	-

	BILL No. 4.11 - KAITI WATER SUPPLY ELECT	RICAL AN	D MECH	ANICAL	
ITEM	ITEM DESCRIPTION POWER SUPPLY	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS)
1	Supply and install and commision H Pole mounted 11/0.4kV 50Hz, 100kVA transformer with all necessary accessories and fittings according to the specifications. Rate includes power application fees.	PC	1		-
	POWER DISTRIBUTION				
	400/1000 volts grade PVC/SWA/PVC copper cable to BS 5467/ IEC 60502 including cable glands, lugs and all accessories				
2	Multi-core(4c) 25mm ² PVC/SWA/PVC armoured copper cable in conduit/floor ducts from main distribution board to the 200A TP&N breaker for pumpset control panel	m	40.00		
3	Multi-core(4c) 25mm ² PVC/SWA/PVC armoured spaced copper cable in conduit/floor ducts from pump soft starter to the motor terminal.	m	90.00		
4	2 - core 4mm² PVC/SWA/PVC copper cables in conduits/floor ducts/cable trays from the sub distribution board to 10A SP&N isolator for Sump pump control panel	m	50.00		
5	Multi-core(4c) 4.0mm ² PVC/SWA/PVC armoured copper cable in conduit/floor ducts from main distribution board to the 50A TP&N breaker for pumpset power factor correction control panel	m	40.00		-
6	4-core 10mm ² PVC/SWA/PVC copper cables in conduits/floor ducts/cable trays from the main distribution board to the station TPN distribution board	m	50.00		
7	Supply, Install, test and commission Horizontally installed, single stage, axially-split volute casing pump with double-entry radial impeller, mating flanges to DIN, ISO, BS or ANSI standards water pumps each of capacity 50m3/hr against 160m head. Include for all excavation, backfilling, demolition, pipe work, concrete works, connect to the Control panel for the pumps (the controls units shall be housed in a wall mounted dust and dump proof sheet steel enclosure with hinged and lockable front door, and door switched power isolator) (system duty point shall be Q=60m3/hr and H=200 m and Q=20m3/hr and H=200 m).				
	The pumps so selected complete with the motor shall have a minimum efficiency of 70% at system duty point. The motors shall be minimum class IE3 efficiency class. The minimum impeller passage shall be 15mm. The motor shall be to minimum IP 55 running at 2900rpm with 50Hz frequency.				
	The pump must be capable of maintaining efficiency over a large pumping range but shall not loose efficiency by more than 5% on 10% either side of the duty point. The suction and delivery pipe set up shall be as shown in the drawings, the quotation to include for all the valves, non return valves, elbows and all other fittings as shown in the drawings. The net positive suction head available is 8m.	LS	1.00		
8	Supply to Wote Treated Water Pumping station, install, and test and commission 400 volts, metal clad floor mounted type, and Main LV and Instrumentation Panel complete with, instrumentation, integral mains phase failure panel and motorised breakers, status indicators and all accessories. 300 Amps TP & N rated busbars at full load integrated using 200Amps TP&N MCCB minimum SCR 10kA adjustable incomer.	LS	1		
	The board is to be fabricated using a minimum of 16 SWG or 2mm thick Galvanised steel sheets. The intrumentation panel will comprise: 1 No. flush ac voltmeter size 95x95mm, 0-500 V ac c/w selector switch and HRC protection fuses; 1 No. flush ac meters size 95x95mm, 0-500 Amps c/w CTS rated 5VA, 300/5 Amps.				
	 PAGE 1 TOTAL TAKEN TO BILL 4.11 COLLECTION PAGE				_
<u>'</u>		ļ	l		ļ

	BILL No. 4.11 - KAITI WATER SUPPLY ELECT	RICAL ANI	D MECH	ANICAL	
ITEM	ITEM DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS)
	BILL No. 4.11 - KAITI WATER SUPPLY ELECT	RICAL ANI	D MECH	ANICAL	
	Integral automatically switched 25 kvar PFC bank, to IP20, comprising dry type capacitors type VARPLUS from MERLIN GERIN Rectiphase, complying to IEC 831 Standards, switched in steps of 1x17, 3x2 ands 2x1kvar complete with all necessary protections, controls, cabling and instrumentationsTo have a digital indicator panel. The board must incorporate a meetering panel to be used by KPLC.				
	The panel shall also include an Automatic Transfer Switch rated at 300Amps The design of the board must be submitted to the Engineer for approval before fabrication. The board shall have one 300 Amp incomer as stated above and the following outgoers 2 No. 150 TPN MCCB one for pumpset booster control panel and the other spare, 2 No 40Amps TPN MCCB for power correction panel and spare, 1 No. 40A TPN MCCB for small power and lighting board. The board shall also have an ATS to allow solar power or KPLC power operation.				
9	150A TP&N (400V)isolator for Booster pump control panel. The panel is to serve 2No. Pumps, each delivering 50m3/hr at 160m head, on the basis of 1 duty and 1 standby. Each pump shall have a soft starter rated at 125 Amps TPN within integrated controls and protection. The protection shall at the very minimum include phase fault, phase failure relay, thermal over load, overcurrent protection, earth leakage and dry run protection. The protection settings shall be to the latest standards of BS or IEC standards. The panels shall also have run hour meter, ammeter and voltmeter for each pump prominently displayed at the front face. The board shall be designed for automatic operation but with an overide to allow manual selection of pumps. The panel shall have automatic step power factor correction capacitors to ensure at no time is the power factor below 0.93. The controls shall use float or pressure switches to achieve start stop operations for the pumps. The panel shall have an audible alarm that sounds whenever there is an electrical fault. The panel shall also have bulbs at the front of the panel illuminating for each pump. The lamps shall be green for pump running, red for pump tripped and amber when pump is not on running but available for duty. Additionally the panel shall be fitted with selector switch to enable the operator to physically select the duty pumps while at the same time retaining the automatic rotational selection capacity to ensure uniform run hours. Each pumpset shall be fitted with an emergency switch adjacent to it to enable immediate stop and another emergency stop button at the panel.	Is	1		
	Switchboard				
10	8 way TPN Sub-distribution board (SDB-1), flush mounted, with 40A TP MCCBmainswitch as manufactured by crabtree with lockable door consisting of:	No	1.00	28,750.00	28,750.00
	-1 pc MCCB of 32A, 3-ph serving sump pump control panel, overhead crane and 3 phase sockets.				
	- 2 pcs MCCB of 10A, 1-ph - 2 pc MCCB of 32A, 1-ph				
	- 3pcs reserve plate, 1-ph,complete				
	Light fittings complete with accessories, lamps and tubes, 1.5 mm ² three core heat resisting cables and wiring to an adjacent lighting point (measured separately) and fixing				
11	Lighting point	No	6.00		
12	6 Amp one gang one way switch a crabtree Lighting fittings	No	4.00		
13	Suspended type fluorescent luminaries c/w lamps, type Phillips TMS 012/2.36 or equivalent with 2x36w lamps, suspended by 2.5mm steel rope.	No	3.00		
F	PAGE 2 TOTAL TAKEN TO BILL 4.11 COLLECTION PAGE				

	BILL No. 4.11 - KAITI WATER SUPPLY ELECT	RICAL AND) MECH	ANICAL	
ITEM	ITEM DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS)
	BILL No. 4.11 - KAITI WATER SUPPLY ELECT				
14	Wall mounted fluorescent luminaries type Phillips PACIFIC 095/1.36 or equivalent with 2x36w lamp	No	3.00		
	Final sub-circuits from distribution board in cable and conduit installation comprising concealed heavy gauge PVC conduit, 2.5mm ² PVC insulated copper cables, 2.5 mm ² copper earthing cable including accessories and fittings				
15	Flush mounted socketoutlets of 32A, 1-ph, 220/240v, 50HZ, fed through Cu 3x2.5mm2 PVC insulated CU wires in 20mm conduits complete with junction boxes, connectors and accessories	No	2.00		
	Final sub-circuit from distribution board in cable and conduit installation comprising concealed heavy gauge PVC conduit 4mm² PVC insulated copper cables, 4mm² earthing cable including accessories.				
16	32A, 3P+N+E power points completely wired in 4 core 4mm² PVC/SWA/PVC copper cables drawn in trunking and runing from the distribution board to the 3 phase 32A socket outlet excluding the switched socket.	No	1.00		
17	32A, 400V, 3P+N+E Surface mounting interlocked switched socket outlet complete with its top plug as MK Cat No. 9645 RED	No	1.00		
18	DN 200 PN 10 gate valves complete with all associated fittings	No.	2		-
19	DN 160 PN 20 gate valves complete with all associated fittings	No	2		- -
20	Pressure Gauge ranging 0-25 Bar	No.	1		-
21	Pressure Gauge ranging 0-4 Bar	No.	1		-
22	Non return Valve DN 160 PN 20	No.	2		-
23	All the necessary internal pipe fittings inside the pump station from the main supply pipe to the outlet connecting all the fittings as per the drawings.	IS	1		-
24	Design, Check, upply and Install and Surge Protection equipment for the pipeline. The deign mut be presented to the EM Engineer for approval before installtion.	LS	1		-
25	Lifting Equipment				
	Supply and install a motorised hoist and associated components with a lifting capacity of 1 tonne for a vertical distance of 5m. The lifting equipment must be capable of moving in three dimensions, that is down/upwards, sideways, forward and backwards and must be fitted with anti sway technology. Details as per the drawings and specifications. Contractor to ensure all associated equipment and fittings are costed for.	ls	1		-
	PAGE 2 TOTAL TAKEN TO BILL 40 COLLECTION BACE				
	PAGE 3 TOTAL TAKEN TO BILL 4.9 COLLECTION PAGE				-

	BILL No. 4.11 - KAITI WATER SUPPLY ELEC	TRICAL ANI	D MECH	ANICAL	
ITEM	ITEM DESCRIPTION	UNIT	QTY	RATE (KSHS)	AMOUNT (KSHS)
	BILL No. 4.11 - KAITI WATER SUPPLY ELEC	TRICAL ANI	D MECH	ANICAL	T
	BILL No. 4.11 COLLECTION PAGE				
	PAGE 1 TOTAL		-	-	-
	D10507071				
	PAGE 2 TOTAL		-	-	-
	DA OF A TOTAL				
	PAGE 3 TOTAL		-	-	-
		-			
		†			
-					
	BILL 4.11 TOTAL TAKEN TO BILL SUMMARY PAGE				-

	BUTUMES OF INDIVIDUAL PROPERTY PORTUGATION OF STANDARD	. OUAIN	DFICOOL		
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
1.0	SUBSTRUCTURES (PROVISIONAL)			,	
	Excavations and Earthworks				
1.1	Excavate average 200mm deep to remove vegetable soil and cart	m3	18.48		-
	away				
	Excavate 0.00-1.50m deep starting from stripped level to receive				
1.2	Foundations	m3	11.00		-
	Extra over excavation in any position for:-				
1.3	Excavating in compacted gravel or decomposed rock	m3	5.00		-
1.4	Excavating in hard rock of all classes	m3	3.00		-
	Approved selected Filling Fill and ram selected excavated materials around foundations and		0.00		
1.4	buildings	m3	9.00		-
	Approved filling as described:-				
1.5	Provide and deposit approved hardcore fill material 200mm thick in making up levels including achieving satisfactory compaction	m2	11.00		-
1.6	Provide, lay and level out, 50mm thick fine crushed stone, sand or gravel blinding to surface of filling, including watering and rolling to achieve satisfactory compaction	m2	11.00		-
	Disposal of Surplus Spoil:-				
1.7	Cart away surplus excavated materials to an approved dumping site	m3	25.00		-
	Anti-Termite Treatment				
	Anti-remitte freatment				
1.8	Chemical anti-termite treatment to surface of filling with an approved insecticide	m2	11.00		-
	Damp-proof Membrane				
1.9	500 Gauge polythene sheeting, laid over hardcore in two layers	m2	11.00		-
	Reinforced Concrete Work: Reinforced Concrete Class 15 (1:4:8) , 40mm maximum aggregate as described in:-				
1.10	50mm thick blinding under foundation concrete	m2	13.00		-
	Guaranteed Strength Reinforced Concrete Class 20/20mm				
1.11	maximum aggregate as described in:- 600mm x 200mm thick foundation strip footing	m3	2.00		_
1.11	Occiniti A 200mm tinek loundation strip looting	1110	2.00		-
1.12	100mm Thick surface bed	m2	11.00		-
	Reinforcement				
	Fabric Reinforcement No. A142 Mesh Size 150 x 150mm Weighing 2.22 kgs Per m2 , Including Bends, Tying Wire and Distance Blocks:-				
1.13	Fabric reinforcement with minimum 150mm wide side and end laps, laid in bed	m2	11.00		-
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 including cutting, bending, propping with spacers and tying as specified:-				
1.14	Reinforcement, all diameters	Kg	94.00		-
	DACE 4 TOTAL CARRIED TO BULL 440 OCCUS FOR TOWN				
	PAGE 1 TOTAL CARRIED TO BILL 4.12 COLLECTION PAGE				-

TE	RATE			BILL No. 4.12 - CONSTRUCTION OF 1 No	
AMOUNT (KShe	(KShs)	QTY	UNIT	DESCRIPTION	ITEM
				Formwork	
				Provide and fix shuttering including propping, strutting and striking, all as specified	
				Wrot Formwork - Class F3 Finish:-	
		13.00	m	Edges of beds and pavings 75 - 150mm wide	1.15
				Walling.	
				Natural Stone Block Walling, Medium Chisel Dressed, Reinforced with 20 swg Hoop Iron at every third course, and Bedded, Jointed and Pointed in Cement Mortar (1:5):-	
-		20.00	m2	200 mm Walling	1.16
-		1.00	m	Extra over 200 mm walling for attached piers 400mm wide projecting 200mm from the wall face	1.17
				Damp-proof course:	
				Bituminous felt damp-proof course as described:-	
-		13.00	m	200mm Wide under walls	1.18
				Plinths.	
-		11.00	m2	15mm Cement and sand (1:4) render to plinth walls, finished with a wood float	1.19
-		13.00	m2	Prepare and apply two coats of bituminous paint on rendered plinth walls	1.20
				Disposal of Water	
-		1.00	Item	Keep excavations free from all water except spring or running water	1.21
-		1.00	Item	Planking and Strutting Allow for normal planking and strutting to uphold sides of excavations (except special shoring or sheet steel piling)	1.22
				+	
				PAGE 2 TOTAL CARRIED TO BILL 4.12 COLLECTION PAGE	

Contract No.: AWSB/AfDB/KTSWS\$P/W/10/2018 BILL No. 4.12 - CONSTRUCTION OF 1 No. GUARD HOUSE					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)
	SUPERSTRUCTURE				
2.0	CONCRETE, FORMWORK, REINFORCEMENT				
	D: (10 10 10 05/00 1 11 11				
2.1	Reinforced Concrete Class 25/20mm as described in: Beams	m3	1.00		_
2.1	Dealing	1110	1.00		_
	Formwork Provide and fix shuttering including propping, strutting and striking, all as specified				
	Wrot Formwork - Class F3 Finish :-				
2.2	Sides and soffites of beams	m2	11.00		-
	Reinforcement				
	Provide and Fix High Tensile Steel Reinforcement to SRN 127 including cutting, bending, propping with spacers and tying as specified:-				
2.3	Reinforcement, all diameters	Kg	94.00		-
2.0	WALLING				
3.0	WALLING External Walls				
	External France				
	Selected Natural Stone Block Walling, Fine Chisel Dressed or Machine Dressed, Reinforced with 20 swg Hoop Iron at every third courses, and Bedded, Jointed and Pointed in Cement Mortar (1:5):-				
3.1	200mm Thick walling	m2	25.00		-
3.2	Extra over 200 mm walling for attached piers 400mm wide projecting 200mm from the wall face	m	2.00		-
	Labours				
3.3	Extra over walling for ruled horizontal and flush vertical joints	m2	25.00		-
		1			
		1			
		1			
	PAGE 3 TOTAL CARRIED TO BILL 4.12 COLLECTION PAGE				-

	Contract No.: AWSB/AfDB/KTSWS\$P/W/10/2018 BILL No. 4.12 - CONSTRUCTION OF 1 No. GUARD HOUSE					
ITEM	DESCRIPTION	UNIT		RATE (KShs)	AMOUNT (KShs)	
	Dressed Stone Cills			(
3.4	200mm Thick x 275mm wide dressed stone cill bedded, jointed and pointed in cement mortar on top of 200mm wall	m	2.00		-	
4.0	ROOF COVERINGS					
	Reinforced Concrete Class 25/20mm as described in:					
4.1	Roofing slab 150mm thick	m3	2.00		-	
	Formwork					
	Provide and fix shuttering including propping, strutting and striking, all as specified					
	Wrot Formwork - Class F3 Finish:-					
4.2	Soffist and edges of roof slabs 75 - 150mm wide	m2	13.00		-	
	Reinforcement Provide and Fix High Tensile Steel Reinforcement to SRN 127 including cutting, bending, propping with spacers and tying as specified :-					
4.2	Reinforcement, all diameters	Kg	350.00		-	
	Fittings					
	The Following In Concrete Worktop 2000mm long x 600mm wide					
5.8	75mm Thick reinforced Concrete Class 20/20mm worktop	m2	4.00		-	
5.9	Mesh Reinforcement Ref. A 142 in concrete top slab.	m2	3.00		-	
5.10	Sawn formwork as described to horizontal soffites of worktop	m2	3.00		-	
	PAGE 4 TOTAL CARRIED TO BILL 4.12 COLLECTION PAGE				-	

	Contract No.: AWSB/AfDB/KTSWS\$P/W/10/2018 BILL No. 4.12 - CONSTRUCTION OF 1 No. GUARD HOUSE					
ITEM	DESCRIPTION	UNIT	QTY	RATE (KShs)	AMOUNT (KShs)	
5.11	Ditto to edges 75-150mm girth	m	7.00	()	-	
5.12	20mm Thick cement and sand (1:4) screed to top and sides of worktop	m2	12.00		-	
5.13	Prepare and apply two coats plastic emulsion paint to plastered horizontal soffites of worktop Form groove 100mm deep in masonry wall to receive 75mm edge of		11.00		-	
5.14			11.00		-	
5.15			7.00		-	
7.0	IRONMONGERY					
	Supply and Fix the following Ironmongery selected from "Union" Catalogue complete with matching screws:-					
7.1	Pairs 100 mm Steel heavy duty washered butt hinges	Nr	3.00		-	
7.2	Three-lever mortice lock as "Union Ref: 680-06-77AS with set of brass lever handles and furniture	Nr	1.00		-	
7.3	Rubber door stop fixed to floor or wall with screw	Nr	1.00		-	
7.1	Solid 251/C91 hat and coat hook with rubber buffer	Nin	1.00		-	
7.4 8.0	METALWORK	Nr	1.00		-	
8.1	Supply and Fix the following Standard Section Horizontal Bar Type Steel Casement Windows with one coat lead oxide primer complete with opening accessories including bedding and pointing around frames in cement mortar: Window size 830 x 1200mm high with 2 No. top-hung ventilators	Nr	2.00		-	
0.1	each with permanent ventilator hood over (W5) Burglar-Proofing to Windows		2.00			
	PAGE 5 TOTAL CARRIED TO BILL 4.12 COLLECTION PAGE				-	

	Contract No.: AWSB/AfDB/KTSWS\$P/W/10/2018 BILL No. 4.12 - CONSTRUCTION OF 1 No. GUARD HOUSE				
ITEM	DESCRIPTION	UNIT		RATE (KShs)	AMOUNT (KShs)
	Burglar-proofing comprising 25 x 3mm thick vertical and horizontal mild steel members at 150mm centres, including one coat lead oxide primer and fixing to the following windows:-				
8.3	To window size 830 x 1200mm high (W5)	Nr	2.00		-
	Steel Doors Pressed Metal Doors				
	Supply and Fix the following Pressed Metal Doors with 100 x 50mm Stiles and Top Rails, 150 x 50mm Middle and Bottom Rails With Pressed Metal Infill 100 x 50mm Pressed Metal Frames, Including Hinges, Pad Bolts and Tower Bolts, All To Manufacturer's Details, with one coat lead oxide primer complete with opening accessories including bedding and pointing around frames in cement mortar:-				
	Single door size 900 x 2200 mm high	Nr	1.00		-
9.0	PLASTERING 12.5mm Thick Gauged Cement Plaster as described internally on :-				
9.1	Concrete or blockwork	m2	25.00		-
9.2	Reveals of openings	m2	2.00		-
	Screeds				
	Bonded cement and sand (1:4) screed bed in one coat, well bonded to concrete base as described:-				
9.3	40mm Thick paving with wood float finish on concrete	m2	11.00		-
9.4	100 x 20mm Thick skirting laid with a square top edge and coved junction with floor finish	m	7.00		-
10.0	GLAZING				
	4mm Thick Clear Sheet Glass And Glazing to Steel Casements with putty in panes:-				
10.1	0.10 - 0.50 Square metres	m2	2.00		-
	1	l	i		1

	Contract No.: AWSB/AfDB/KTSWS BILL No. 4.12 - CONSTRUCTION OF 1 No.		•		
ITEM	DESCRIPTION	UNIT		RATE (KShs)	AMOUNT (KShs)
11.0	PAINTING AND DECORATING				
-	Prepare and apply one coat aluminium primer before fixing to:-				
11.1	Backs of wood 0-100m girth	m	1.00		-
	Prepare, knot, prime, stop and apply three coats first quality gloss paint to wood surfaces				
	Internally on:-				
11.4	Surfaces 0-100mm girth	m	13.00		-
11.5	Ditto 200-300m girth	m	7.00		-
11.6	General surfaces of doors (measured flat overall)	m2	20.00		-
	Prepare, touch up primer and apply three coats gloss paint : Externally on:-				
11.7	General surfaces of glazed metal windows, including burglar- proofing (measured flat overall)	m2	2.00		-
	Internally on:-				
11.8	General surfaces of glazed metal windows, including burglar- proofing (measured flat overall)	m2	2.00		-
	Prepare and apply three coats exterior quality plastic emulsion paint:-				
	Externally on:-				
11.9	Fair-faced horizontal sides and soffites of beams	m2	4.00		-
	Prepare and apply three coats interior quality plastic emulsion paint:-				
	Internally on:-				
11.10	Plastered concrete or blockwork	m2	13.00		-
11.11	Ditto reveals of openings	m2	2.00		-
	Prepare and apply three washable distemper as described to:-				
11.12	Horizontal soffites of suspended ceilings slab	m2	11.00		-
11.13	Horizontal surfaces 100-200mm girth	m	11.00		-
	Prepare and apply High Strength Non-skid Epoxy Flooring Paint to:-				
11.14	Cement and sand screed floors, skirtings, treads, risers, etc.	m2	11.00		-
	Provide for electrical lighting bulps, switched and socket	sum	1		-
	DAGE 7 TOTAL CARRIED TO BILL 140 COLLECTION BY CO.				
	PAGE 7 TOTAL CARRIED TO BILL 4.12 COLLECTION PAGE				-

Brought Forward From Page 1 Brought Forward From Page 2 Brought Forward From Page 3 Brought Forward From Page 4 Brought Forward From Page 5 Brought Forward From Page 6 Brought Forward From Page 7		Amount -
Brought Forward From Page 2 Brought Forward From Page 3 Brought Forward From Page 4 Brought Forward From Page 5 Brought Forward From Page 6		-
Brought Forward From Page 2 Brought Forward From Page 3 Brought Forward From Page 4 Brought Forward From Page 5 Brought Forward From Page 6		-
Brought Forward From Page 3 Brought Forward From Page 4 Brought Forward From Page 5 Brought Forward From Page 6		-
Brought Forward From Page 3 Brought Forward From Page 4 Brought Forward From Page 5 Brought Forward From Page 6		-
Brought Forward From Page 4 Brought Forward From Page 5 Brought Forward From Page 6		
Brought Forward From Page 4 Brought Forward From Page 5 Brought Forward From Page 6		-
Brought Forward From Page 5 Brought Forward From Page 6		-
Brought Forward From Page 6		
Brought Forward From Page 6		-
Brought Forward From Page 7		-
Brought Forward From Page /		
		-
	1	
BILL NO 4.12 TOTAL CARRIED TO SUMMARY PAGE		 1

Technical Bid

Site Organization
Method Statement
Mobilization Schedule
Construction Schedule
ES Management Strategies and Implementation Plans
Code of Conduct (ES)
Equipment
Key Personnel Schedule
Others

Technical Bid-Base Bid

Technical Bid-Base Bid

[Note for information of Bidder: Bidders shall demonstrate compliance with the Employer's requirements and Technical Specifications as described in Section VII of the Bidding Documents. Any departures or deviations from the required Technical Specifications shall be highlighted and if there are none, full compliance shall be confirmed.

The Bidder shall provide the Technical Bid for the Base-Bid complete in all respect including Technical information and standards, codes, designs and specifications, of Works offered along with all documentation mentioned in ITB 16 and Section VII of the Bidding Document. This will include relevant literatures, data or drawings, test results and other supporting documents, including all information requested in the Bidding Document and as may be necessary to establish conformity with the Employer's Specifications and requirements.

Any deviations in the technical standards, codes, designs or specifications or other requirements from those stated in the Bidding Documents shall be explained indicating their impact on the performance requirements, characteristics or parameters of the works. To this end, for any such deviations to be acceptable, Bid shall establish to the satisfaction of the Employer substantial responsiveness to the required technical specifications by explaining and documenting for the offered works, equivalency with or improvement to the required technical standards, codes, designs and Specifications.

Any Major deviation from the Employer's requirements shall be the cause for rejection of the Bid. Any deviation which in the Bidder's opinion is considered minor, the Bidder shall provide evidence to this effect including evidence of any monetary implications caused by such deviation. The Employer's evaluation shall be independent of Bidder's opinion on such matters and shall be final.

Site Organization

[insert Site Organization information]

Method Statement

[insert Method Statement]

Section IV: Bidding Forms _____ Page | 75

Mobilization Schedule

[insert Mobilization Schedule]

In accordance with the Particular Conditions, Sub-Clause 4.1, the Contractor shall not carry out mobilization to Site unless the Engineer gives consent that appropriate measures are in place to address environmental and social risks and impacts, which as a minimum shall include applying the Management Strategies and Implementation Plans (MSIPs) and Code of Conduct for Contractor's Personnel, submitted as part of the Bid and agreed as part of the Contract.

Construction Schedule

[insert Construction Schedule]

The construction schedule shall include the following key milestones:

- No-objection to the Contractor's MSIPs, which collectively form the C-ESMP, in accordance with the Particular Conditions Special provisions Sub-Clause 4.1.
- Constitution of the DAAB

ES Management Strategies and Implementation Plans

(ES-MSIP)

The Bidder shall submit comprehensive and concise Environmental and Social (ES) Management Strategies and Implementation Plans (ES-MSIP) as required by ITB 11.1 (j) of the Bid Data Sheet. These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Contractor, and its subcontractors.

In developing these strategies and plans, the Bidder shall have regard to the ES provisions of the contract including those as may be more fully described in the Works Requirements in Section VII.

Code of Conduct for Contractor's Personnel (ES) Form

Note to the Bidder:

The minimum content of the Code of Conduct form as set out by the Employer shall not be substantially modified. However, the Bidder may add requirements as appropriate, including to take into account Contract-specific issues/risks.

The Bidder shall initial and submit the Code of Conduct form as part of its bid.

CODE OF CONDUCT FOR CONTRACTOR'S PERSONNEL

We are the Contractor, [enter name of Contractor]. We have signed a contract with [enter name of Employer] for [enter description of the Works]. These Works will be carried out at [enter the Site and other locations where the Works will be carried out]. Our contract requires us to implement measures to address environmental and social risks related to the Works, including the risks of sexual exploitation, sexual abuse and sexual harassment.

This Code of Conduct is part of our measures to deal with environmental and social risks related to the Works. It applies to all our staff, labourers and other employees at the Works Site or other places where the Works are being carried out. It also applies to the personnel of each subcontractor and any other personnel assisting us in the execution of the Works. All such persons are referred to as "Contractor's Personnel" and are subject to this Code of Conduct.

This Code of Conduct identifies the behavior that we require from all Contractor's Personnel.

Our workplace is an environment where unsafe, offensive, abusive or violent behavior will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

REQUIRED CONDUCT

Contractor's Personnel shall:

- 1. carry out his/her duties competently and diligently;
- 2. comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
- 3. maintain a safe working environment including by:
 - a. ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
 - b. wearing required personal protective equipment;
 - c. using appropriate measures relating to chemical, physical and biological substances and agents; and
 - d. following applicable emergency operating procedures.

Section	IV: Bidding	Forms	Page	79	

- 4. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
- 5. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
- 6. not engage in Sexual Harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
- 7. not engage in Sexual Exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another;
- 8. not engage in Sexual Abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
- 9. not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
- 10. complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH);
- 11. report violations of this Code of Conduct; and
- 12. not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Employer, or who makes use of the grievance mechanism for Contractor's Personnel or the project's Grievance Redress Mechanism.

RAISING CONCERNS

If any person observes behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either of the following ways:

- 1. Contact [enter name of the Contractor's Social Expert with relevant experience in handling sexual exploitation, sexual abuse and sexual harassment cases, or if such person is not required under the Contract, another individual designated by the Contractor to handle these matters] in writing at this address [] or by telephone at [] or in person at []; or
- 2. Call [] to reach the Contractor's hotline (if any) and leave a message.

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.

There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

CONSEQUENCES OF VIOLATING THE CODE OF CONDUCT

Any violation of this Code of Conduct by Contractor's Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

FOR CONTRACTOR'S PERSONNEL:

I have received a copy of this Code of Conduct written in a language that I comprehend. I understand that if I have any questions about this Code of Conduct, I can contact [enter name of Contractor's contact person with relevant experience] requesting an explanation.

Name of Contractor's Personnel: [insert name]	
Signature:	
Date: (day month year):	
Countersignature of authorized representative of the Contractor:	
Signature:	
Date: (day month year):	
ATTACUMENT 1. Dehaviours constituting Sevuel Exploitation and Abuse ((CEA)

ATTACHMENT 1: Behaviours constituting Sexual Exploitation and Abuse (SEA) and behaviours constituting Sexual Harassment (SH)

ATTACHMENT 1 TO THE CODE OF CONDUCT FORM

BEHAVIORS CONSTITUTING SEXUAL EXPLOITATION AND ABUSE (SEA) AND BEHAVIORS CONSTITUTING SEXUAL HARASSMENT (SH)

The following non-exhaustive list is intended to illustrate types of prohibited behaviours.

(1) Examples of sexual exploitation and abuse include, but are not limited to:

- A Contractor's Personnel tells a member of the community that he/she can get them jobs related to the work site (e.g. cooking and cleaning) in exchange for sex.
- A Contractor's Personnel that is connecting electricity input to households says that he can connect women headed households to the grid in exchange for sex.
- A Contractor's Personnel rapes, or otherwise sexually assaults a member of the community.
- A Contractor's Personnel denies a person access to the Site unless he/she performs a sexual favor.
- A Contractor's Personnel tells a person applying for employment under the Contract that he/she will only hire him/her if he/she has sex with him/her.

(2) Examples of sexual harassment in a work context

- Contractor's Personnel comment on the appearance of another Contractor's Personnel (either positive or negative) and sexual desirability.
- When a Contractor's Personnel complains about comments made by another Contractor's Personnel on his/her appearance, the other Contractor's Personnel comment that he/she is "asking for it" because of how he/she dresses.
- Unwelcome touching of a Contractor's or Employer's Personnel by another Contractor's Personnel.
- A Contractor's Personnel tells another Contractor's Personnel that he/she will get him/her a salary raise, or promotion if he/she sends him/her naked photographs of himself/herself.

Section IV: Bidding Forms _____ Page | 82

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.

Equipment information	Name of manufacturer	Model and power rating		
	Capacity	Year of manufacture		
Current status	Current location			
	Details of current commitment	S		
Source	Indicate source of the equipme ☐ Owned ☐ Rented	nt □ Leased □ Specially manufactured		
	ving information for equipment of	owned by the Bidder.		
mit the follow				
mit the follov Owner	Name of owner			
	Name of owner Address of owner			
		Contact name and title		
	Address of owner	Contact name and title Telex		

Form PER -1

Contractor's Representative and Key Personnel Schedule

Bidders should provide the names and details of the suitably qualified Contractor's Representative and Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

Contractor' Representative and Key Personnel

1.	Title of position: Contractor's Representative		
	Name of candidate:		
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]	
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]	
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart]	
2.	Title of position: [Env	vironmental Specialist]	
	Name of candidate:		
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]	
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]	
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart]	
3.	Title of position: [Hea	1 alth and Safety Specialist]	
	Name of candidate:		
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]	
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]	
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart]	

4.	Title of position: [Social Specialist]				
	Name of candidate:				
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]			
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]			
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart]			
5.	Title of position: Sexu	al Exploitation, Abuse and Harassment Expert			
	[Where a Project SEA risks are assessed to be substantial or high, Key Personnel shall include an expert with relevant experience in addressing sexual exploitation, sexual abuse and sexual harassment cases]				
	Name of candidate				
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]			
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]			
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart]			
6.	Title of position: [insert title]				
	Name of candidate				
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]			
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]			
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart]			

Form PER-2: Resume and Declaration

Contractor's Representative and Key Personnel

der	
: [title of position from Form	n PER-1
Name:	Date of birth:
Address:	E-mail:
Professional qualification	ıs:
	anguage and levels of speaking, reading and writing
Address of employer:	
Telephone:	Contact (manager / personnel officer):
Fax:	
Job title:	Years with present employer:
	Ititle of position from Form

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Role	Duration of involvement	Relevant experience
[role and responsibilities on the project]	[time in role]	[describe the experience relevant to this position]
ľ	role and responsibilities on the	role and responsibilities on the [time in role]

Declaration

I, the undersigned [insert either "Contractor's Representative" or "Key Personnel" as applicable], certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Bid:

Commitment	Details
Commitment to duration of contract:	[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]
Time commitment:	[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]

I understand that any misrepresentation or omission in this Form may:

- (a) be taken into consideration during Bid evaluation;
- (b) result in my disqualification from participating in the Bid;
- (c) result in my dismissal from the contract.

Name of Contractor's Representative or Key Personnel: [insert name]	
Signature:	
Date: (day month year):	
Countersignature of authorized representative of the Bidder:	
Signature:	
Date: (day month year):	

Commercial Terms and Conditions

[Bidder shall specify any deviations to the provisions of the Bidding Document (other than
Technical Specifications) in particular those specified in Part 3 of the Bidding document
including General and Particular Conditions of Contract. If "None" it shall be confirmed
accordingly]

Bidders Qualification without prequalification

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:	
	OCBI/LCB	No. and title:	
	Page		pages
Bidder's name			
In case of Joint Venture (JV), name of each member:			
Bidder's actual or intended country of registration:			
[indicate country of Constitution] Bidder's actual or intended year of incorporation:			
Bidder's legal address [in country of registration]:			
Bidder's authorized representative information			
Name:Address:	-		
Telephone/Fax numbers:			
E-mail address:			
1. Attached are copies of original documents of			
☐ Articles of Incorporation (or equivalent document registration of the legal entity named above, in accor		· · · · · · · · · · · · · · · · · · ·	or documents of
☐ In case of JV, letter of intent to form JV or JV agree	eement, in acco	ordance with ITB 4.1	
$\ \square$ In case of state-owned enterprise or institution, in	accordance wit	th ITB 4.6, document	s establishing:
 Legal and financial autonomy Operation under commercial law Establishing that the Bidder is not under the superational commercial law 			
2. Included are the organizational chart, a list of Board required under BDS ITB 47.1, the successful Bidder ownership, using the Beneficial Ownership Disclosi	r shall provide		1 20

Form ELI -1.2

Bidder's JV Information Form

(to be completed for each member of Bidder's JV)

Bidder's Name:

	Date:	
	ember's Name	
OCE	BI/LCB No. and title:	
Page	of	pages
Name of the Reporting Fir	m	
JV Information of the Rep	orting Firm	
D'11. 2. W/		
Bidder's JV name:		
IV member's name:		
ov member s name.		
IV member's country of registration:		
, c		
IV member's year of constitution:		
, inclined a four of communion.		
IV member's legal address in country of constitution:		
ov memoer's legal address in country of constitution.		
W/ l ' d 1 d. div i f div		
IV member's authorized representative information		
Name:		
Address:		
Telephone/Fax numbers:		
E-mail address:		
1. Attached are copies of original documents of		
☐ Articles of Incorporation (or equivalent documents of co		nd/or registration
documents of the legal entity named above, in accordance	with ITB 4.4.	
\square In case of a state-owned enterprise or institution, docum	0 0	▼ :
operation in accordance with commercial law, and that t	hey are not under the super	vision of the
Employer, in accordance with ITB 4.6.		
2. Included are the organizational chart, a list of Board of D		
required under BDS ITB 47.1, the successful Bidder sha	1	nation on beneficial
ownership for each JV member using the Beneficial Ow	nership Disclosure Form.]	

Form ELI -1.3

Eligible Materials, Equipment and Services Form

(to be completed by the Bidder)

Bidder's Na	ame:	
Date	e:	
OCBI/LCB No. and title:		
Page	of	
		pages

Eligible Materials, Equipment and Services: In compliance with ITB 5, provide the following information for all Materials, Equipment and Services included under the Contract. Instead of listing each and every item, broad categories are listed below. Include all items in these categories unless any item to be supplied is not covered by any one of them in which case list them separately.

1	2	3		5
S. No.	Description of Broad Category of Materials/Equipment and Services	Estimated Quantity- [Indicate: "All quantity as required" or quantity by subcategory of items]	Estimated Aggregate Value (US Dollar Equivalent)	Countries of Origin
1	All Construction and Testing Materials including raw materials, Cement, Steel, Timber, Lime, Sand, Aggregates, Plastics, Bitumen, Oils, Lubricants, etc. as per specification			
2	All types of Plants, Equipment including Laboratory and Testing Equipment, All types of Vehicles, Furniture, Fittings and Fixtures, Pipes, Tools, Steel and Other Structures, Utensils, Computers and Other IT Equipment, etc. as per specification			
3	All Types of Services including Construction, Installation, Assembly, Inspection, Supervision, Care of Sites, Labor (Skilled and Unskilled), Drilling,			

	Mapping, Transportation and Insurance, etc. as per specification		

Form CON - 2

Historical Contract Non-Performance, Pending Litigation and Litigation History

[The form shall be filled in by the Bidder, and each member of a Joint Venture, if the Bidder is a JV]

[1	ne jorin shall be ji	uea in by the Biader, and each member of a Joint venture, if the	-
		Bidder's Name:	
		Date:	
		JV Member's Name	
		OCBI/LCB No. and title:of	pages
		1 u go0101	pages
	Nai	me of the Reporting Firm	
Histor	ical Contract No	on-Performance, Pending Litigation and Litigation Hi Reporting Firm	story of the
No	n-Performed Con	tracts in accordance with Section III, Evaluation and Qualific	eation Criteria
	ct non-performanc alification Criteria	e did not occur since 1 st January <i>[insert year]</i> specified in Sect., Sub-Factor 2.1.	tion III, Evaluation
	ct(s) not performe cation Criteria, red	d since 1^{st} January <i>[insert year]</i> specified in Section III, Evaluquirement 2.1	uation and
Year	Non-	Contract Identification	Total Contract
	performed portion of contract		Amount (current value, currency, exchange rate and US\$ equivalent)
[insert year]	[insert amount and percentage]	Contract Identification: [indicate complete contract name/number, and any other identification]	[insert amount]
		Name of Employer: [insert full name]	
		Address of Employer: [insert street/city/country]	
		Reason(s) for nonperformance: [indicate main reason(s)]	
	Pending Litigation	n, in accordance with Section III, Evaluation and Qualification	n Criteria
□ No pen 2.3.	ding litigation in a	ccordance with Section III, Evaluation and Qualification Cr	iteria, Sub-Factor
	g litigation in accored below.	rdance with Section III, Evaluation and Qualification Criteria,	Sub-Factor 2.3 as

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute: Party who initiated the dispute: Status of dispute:	
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute: Party who initiated the dispute: Status of dispute:	
_	<u>-</u>	e with Section III, Evaluation and Qualification	
Factor 2.4.	n History in accordance v	nce with Section III, Evaluation and Qualification with Section III, Evaluation and Qualification C	

Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)
[insert year]	[insert percentage]	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Employer: [insert full name] Address of Employer: [insert street/city/country] Matter in dispute: [indicate main issues in dispute] Party who initiated the dispute: [indicate "Employer" or "Contractor"] Reason(s) for Litigation and award decision [indicate main reason(s)]	[insert amount]

Form CON - 3

Environmental and Social (ES) Performance Declaration

[The following table shall be filled in by the Bidder, by each member of a Joint Venture and each Specialized Subcontractor]

Bidder's Name: [insert full name]
Date: [insert day, month, year]
Joint Venture Member's or Specialized Subcontractor's Name: [insert full name]
OCBI/LCB No. and title: [insert IFB number and title]
Page [insert page number] of [insert total number] pages

Name of the Reporting Firm	
----------------------------	--

Environmental and Social (ES) Performance Declaration of the Reporting Firm

Environmental and Social Performance Declaration

	in accord	ance with Section III, Qualification Criteria, and Requiremen	ts
called perfor Decla or terr	the performance mance since the dat ration of suspension minated and/or Performance	nation of contract: An employer has not suspended or terminal security for a contract for reasons related to Environment sespecified in Section III, Qualification Criteria, and Requirement on or termination of contract: The following contract(s) has/formance Security called by an employer(s) for reasons related to since the date specified in Section III, Qualification Criteria, are described below:	ntal or Social (ES) ents, Sub-Factor 2.5. nave been suspended to Environmental or
Year	Suspended or terminated portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
[insert year]	[insert amount and percentage]	Contract Identification: [indicate complete contract name/number, and any other identification] Name of Employer: [insert full name] Address of Employer: [insert street/city/country] Reason(s) for suspension or termination: [indicate main reason(s) e.g. gender-based violence; sexual exploitation or sexual abuse breaches]	[insert amount]
[insert year]	[insert amount and percentage]	Contract Identification: [indicate complete contract name/number, and any other identification] Name of Employer: [insert full name] Address of Employer: [insert street/city/country] Reason(s) for suspension or termination: [indicate main reason(s)]	[insert amount]
		[list all applicable contracts]	

Perform		
Year		Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
[insert year]	Contract Identification: [indicate complete contract name/ number, and any other identification]	[insert amount]
	Name of Employer: [insert full name]	
	Address of Employer: [insert street/city/country]	
	Reason(s) for calling of performance security: [indicate main reason(s) e.g. for gender-based violence; sexual exploitation, or sexual abuse breaches]	

Form FIN – 3.1: Financial Situation and Performance

[The form shall be filled in by the Bidder, and each member of a Joint Venture, if the Bidder is a JV]

	I	Bidder's Name: Date:	
	JV Member's No. OCBI/LCB No. and title	ame	
	Page	of	pages
Name of the	e Reporting Firm		
Financial Situation	and Performance of the R	eporting Firm	

1. Financial data

Type of Financial information in	n Historic information for previousyears,								
(currency)	(amount in currency, currency, exchange rate*, USD equivalent)								
	Year 1	Year 2	Year 3	Year 4	Year 5				
Statement of	Statement of Financial Position (Information from Balance Sheet)								
Total Assets (TA)									
Total Liabilities (TL)									
Total Equity/Net Worth (NW)									
Current Assets (CA)									
Current Liabilities (CL)									
Working Capital (WC)									
	Information from	n Income Stateme	ent						
Total Revenue (TR)									
Profits Before Taxes (PBT)									
	Cash Flow	v Information	1	1	1				
Cash Flow from Operating Activities									

^{*}Refer to ITB 15 for the exchange rate

Section	IV:	Bidding	Forms	Page	1	0	ĺ

2. Sources of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (US\$ equivalent)					
1							
2							
3							
3.]	3. Financial documents						
	e Bidder and its parties shall provide copies of financial st rsuant Section III, Evaluation and Qualifications Criteria, Sub-fa ill:						
	(a) reflect the financial situation of the Bidder or in case of J entity (such as parent company or group member).	V member, and not an affiliated					
	(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 statements ⁵ for the complying with the requirements	years required above; and					

Section IV: Bidding Forms _____ Page | 101

⁵ 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: Average Annual Construction Turnover

[The form shall be filled in by the I	Bidder, and each member of a	Joint Venture, if the I	Bidder is a JV]
	В	Bidder's Name:	
		Date:	
	JV Member's Na	ime	
	OCBI/LCB No. and title	:	
	Page	of	pages
Name of the Rep	orting Firm		
Average Annual Const	ruction Turnover of th	e Reporting Fire	n

		Annual turnover data (construction only)			
Year	Amount Currency		Exchange rate	USD equivalent	
[indicate year] [insert amount and indicate currency]					
A					
Average Annual					
Construction Turnover *					

^{*} See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2.

Form FIN – 3.3: Financial Resources

[The form shall be filled in by the Bidder, and each member of a Joint Venture, if the Bidder is a JV]

Bidder'	Bidder's Name:				
Date	»:				
JV Member's Name					
OCBI/LCB No. and title:					
Page	of	pages			
Name of Reporting Firm:					
Financial Resources of the Reporting Firm					

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 consistent with information provided under form FIN--3.4

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

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

[The form shall be filled in by the Bidder, and each member of a Joint Venture, if the Bidder is a JV]

	Bid	lder's Name:	
		Date:	
	JV Member's Nam	ie	
OCBL	LCB No. and title:		
	Page	of	pages
Name of Reporting Firm	:		
Current Contract Commitments / Wor	ks in Progress of	the Reporting Firm	

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.

Based on value of all outstanding works and average monthly invoicing, the Bidder and each Member to a JV shall explain how completion by estimated time is proposed to be achieved for each contract listed.

The Bidder and each Member of a JV shall also demonstrate based on access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments consistent with information provided by the Bidder/Each JV Member under Forms FIN--3.1, FIN 3.3 and this Form FIN 3.4 how the overall cash flow requirements for this Contract and their all other current contract commitments will be met.

Current Contract Commitments and Cash-Flow Requirements						
1	2	3	4	5	6	7
S. No.	Name of Contract	Employer's Contact Address, Tel, Fax	Value of Outstanding Work [Current US\$ Equivalent]	Estimated Completion Date/Time in Months to complete	Average Monthly Invoicing Over Last Six Months [US\$/month]	Estimated Cash-Flow Required for every 4 months= [Value under column 4 divided by Months under column 5 times 4]
Explanat	tion:					

Form EXP - 4.1: General Construction Experience

[The form shall be filled in by the Bidder, and each member of a Joint Venture, if the Bidder is a JV]

	Bidder's Name:	
JV Member's N	Name	
OCBI/LCB No. and tit	le:	
Page	of	pages
Name of the Reporting Firm		
General Construction Experience of the Rep	oorting Firm	

Starting Year	Ending Year	Contract Identification	Role of Bidder	
		Contract name:		
		Brief Description of the Works performed by	the	
		Bidder:		
		Amount of contract:		
		Name of Employer:		
		Address:		
		Contract name:		
		Brief Description of the Works performed by	the	
		Bidder:		
		Amount of contract:		
		Name of Employer:		
		Address:		
		Contract name:		
		Brief Description of the Works performed by	the	
		Bidder:		
		Amount of contract:		
		Name of Employer:		
		Address:		

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

[The form shall be filled in by the Bidder, and each member of a Joint Venture, if the Bidder is a JV and specialized Sub-Contractors, if applicable]

	F	Bidder's Name:	
		Date:	
JV Memb	per's Name if the Bidde	er is a JV	
Specialized Subcontra	actor's Name <i>[Insert fu</i>	ıll name if permitted]	
- C	OCBI/LCB No. and title	e:	
	Page	of	pages
Name of the Report	ing Firm		
Specific Construction and Contract M	lanagement Experien	nce of the Reportin	g Firm

Similar Contract No.		Informa	ntion	
Contract Identification	[insert contr	act name and nu	mber, if appli	cable]
Name of the firm that was awarded the contract identified above				
Award date	[insert day, r	nonth, year, e.g.	, 15 June 201	6]
** Completion date	[insert day, month, year, e.g., 03 May 2018]			8]
Role in Contract identified above [check the appropriate box. Check box as "Prime Contractor" if contract was awarded to the reporting firm as a single construction contractor. Check Box "Member in JV" if the contract was awarded to a JV and was a member of the JV. Check Box "Management Contractor" if the reporting firm signed the construction contract and was responsible for its performance and completion of works as per terms and conditions of the contract. Also see *** below. Check Box "Sub-Contractor" if the reporting firm was a sub-contractor appointed by the main contractor who was awarded the contract]	Prime Contractor □	Member in JV □	Management Contractor *** □	Sub-contractor

Total Contract Amount	[insert total c in local curre	contract amount ency]	US\$ [insert Exchange rate and total contract amount in US\$ equivalent]*	
If reporting firm was a member in a "JV" or "sub-contractor", as per box checked above, it can claim experience only for its' own share of works actually performed under the contract and not the entire contract. As such, the reporting firm shall indicate its share as a percentage of the total Contract amount and also in absolute amount	[insert the percentage of the total contract amount indicated above which represents reporting firm's share under the contract performed]	[insert amount the reporting firm received or entitled to for the works performed as its share in the total contract amount in local currency]	[insert exchange rate and total contract amount in US\$ equivalent]*	
Roles and Responsibilities	[Briefly describe roles and responsibilities of the Reporting firm under the above contract]			
Employer's Name:	[Insert Full Name]			
Address: Telephone/fax number	[indicate street / number / town or city / country] [insert telephone/fax numbers, including country an city area codes]			
E-mail:	į inseri e-mai	il address, if ava	uaviej	

- * Refer Section III for guidance on the date and source of exchange rate.
- ** If contract is not fully completed but substantially completed then indicate the absolute total value of the completed part of the contract and also the percentage completion calculated as a percentage of the total value of the contract upon completion.
- *** In claiming experience as a Management Contractor, the Bidder shall furnish copies of the contracts signed by the Bidder demonstrating scope of construction works performed. It should be noted that a Construction Manager is not the same as a Management Contractor. Construction Manager is a consultant for or agent of the Borrower and mainly responsible for supervision of the construction works and does not take the risks associated with the performance of the construction contracts as the Management Contractor does. Instead of performing the works directly, a Management Contractor contracts out and manages the work of other contractors taking on full responsibility and risk for price, quality and timely performance as per the terms and conditions of contracts it signs with the Employers.

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

Similar Contract No.	Information
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	
2. Physical size of required works items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

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

[The form shall be filled in by the Bidder, and each member of a Joint Venture, if the Bidder is a JVand specialized Sub-Contractors, if applicable]

Bidder's Name:						
Date:						
	lame:					
	Sub-contractor's Name (as per 11B 34):					
OCBI/LCB No. and title:						
	Page	of		pages		
	Reporting Firm_					
Construction Experience in Key complete	Activities of the ted or under impl		n under each co	ontract		
Bidder, Members of the JV or proposactivities must complete the information and Qualification Criteria, Sub-Factowhen claiming experience by aggregatic contract]	ion in this form as or 4.2. <i>[Provide i</i> i	s per ITB 34 an information for	nd Section III, E each contract	valuation separately		
1. Key Activity No One:						
			Informatio	n		
Contract Identification						
Award date						
Completion date as per Contract						
Role in Contract	Prime Contractor	Member in JV	Management Contractor	Sub-contracto		
Total Contract Amount			US\$			
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:		Infor	nation			
	[insert response	e to Employer's i	inquiry indicated	in left		
		colı	ımn]			

Section IV: Bidding Forms _____ Page | 110

	Information				
Quantity (Volume, number or rate of production, as applicable for the Key activity) performed under the contract per year or part of the year. For each year indicate quantities performed and specify both start and end months.	Total quantity in the contract (i)	Percentage participation (ii)	Actual Quantity Performed (i) x (ii)		
[Insert extent of participation indicating actual quantity of key activity successfully completed in the role performed]					
Year 1 [e.g. 2016 from January to September]					
Year 2 [e.g. 2017 from January to December]					
Year 3					
Year 4					
In response to the criterion for rates of production in 12 consecutive months or less, if performance under more than one contract spread over more than one year are considered, the Applicant shall provide information by months for each such contract to demonstrate which same 12 consecutive months meet the minimum rate of production.					
Employer's Name:					
Address: Telephone/fax number E-mail:					
2. Activity No. Two					

Form EXP - 4.2(c)

Specific Experience in Managing ES aspects

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

	Bidder's Name: Date: Bidder's JV Member Name: RFB No. and title:					
	Pageof					
1. Key Requirement no 1 in accordance	with 4.2 (c):					
Contract Identification						
Award date						
Completion date						
Role in Contract	Prime Contractor	Member in JV	Management Contractor	Subcontractor		
Total Contract Amount			US\$			
Details of relevant experience			ı			
2. Key Requirement no 2 in accordance3. Key Requirement no 3 in accordance						

Form of Bid Security - Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

L		, ,
Invit OCH Date BID nume Guar	BI/LCB No.: [Electric let be ber]	[Insert name and address of the Employer] [Insert reference number for the Invitation for Bids] nployer to insert same OCBI number as in procurement plan] [Insert date of issue] [Insert guarantee reference] [Insert Guarantor's name and address of place of issue, unless
Appl Bid"	') for the execution of	t (hereinafter called "the vill submit to the Beneficiary its Bid (hereinafter called "the under Invitation for Bids No ive Bidding (International) No ("the OCBI").
	hermore, we understand the borted by a Bid guarantee.	at, according to the Beneficiary's conditions, Bids must be
unde	ertake to pay the Benefici , (, oorted by the Beneficiary's	to issue this guarantee, we, as Guarantor, hereby irrevocably ary any sum or sums not exceeding in total an amount of upon receipt by us of the Beneficiary's complying demand, statement, whether in the demand itself or a separate signed ntifying the demand, stating that either the Applicant:
(a)		ng the period of Bid validity set forth in the Applicant's Letter Period"), or any extension thereto provided by the Applicant;
(b)	Validity Period or any execute the contract agree if required, the Environment	the acceptance of its Bid by the Beneficiary during the Bid stension thereto provided by the Applicant, (i) has failed to ment, or (ii) has failed to furnish the Performance Security and, ental and Social (ES) Performance Security, in accordance with a ("ITB") of the Beneficiary's Bidding document.
require the e	les of the contract agreement aired, the Environmental and elation to such contract agree earlier of (i) our receipt of a	if the Applicant is the successful Bidder, upon our receipt of t signed by the Applicant and the Performance Security and, if d Social (ES) Performance Security, issued to the Beneficiary ement; or (b) if the Applicant is not the successful Bidder, upon a copy of the Beneficiary's notification to the Applicant of the r (ii) twenty-eight days after the end of the Bid Validity Period.
	sequently, any demand for ce indicated above on or be	payment under this guarantee must be received by us at the fore that date.
	s guarantee is subject to ision, ICC Publication No.	the Uniform Rules for Demand Guarantees (URDG) 2010 758.

Section IV: Bidding Forms _____ Page | 113

signature(s)]						
Note: In case the Jembers of the J	e Applicant is a oint Venture tha	Joint Ventur at submitted o	e indicate the or will submit	name of the J	oint Venture of	r names of a

Form of Bid-Securing Declaration

Date: OCBI/LCB No.: [insert number as in procurement plan].: Alternative No.:
To:
We, the undersigned, declare that:
We understand that, according to your conditions, Bids must be supported by a Bid-Securing Declaration.
We accept that we will automatically be suspended from being eligible for Bidding in any contract with the Employer for the period of time of <i>[insert number of months or years consistent with BDS 19.9]</i> , if we are in breach of our obligation(s) under the Bid conditions, because we:
(a) have withdrawn our Bid during the period of Bid validity specified in the Letter of Bid or any extension thereto provided by us; or
(b) having been notified of the acceptance of our Bid by the Employer during the period of Bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security and, if required, the Environmental and Social (ES) Performance Security in accordance with the ITB 48.
The start date of suspension shall be the first date we perform any of the actions mentioned in paragraph (a) and (b) above. We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder or (ii) twenty-eight days after the expiration of our Bid.
Name of the Bidder*
* In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder ** Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all members to the Joint Venture that submits the Bid.]

Section V - Eligible Countries

Eligibility for the Provision of Goods, Works and Non-Consulting Services in Bank Group Financed Procurement

- A. Provisions under Section 5 "Eligibility" of the Procurement Policy for Bank Group Funded Operations and Chapter A2 of the Operations Procurement Manual under Procurement Framework of the African Development Bank
- 1. The African Development Fund (ADF) permits firms and individuals from all countries to offer goods, works and services for ADF funded projects.

However, the proceeds of any Financing undertaken in the operations of the African Development Bank (ADB) and the Nigeria Trust Fund (NTF) shall be used for procurement of goods and works, including the related services, provided by bidders from Eligible¹ Countries.² Any conditions for participation shall be limited to those that are essential to ensure the firm's capability to fulfill the contract in question. In the case of ADB and NTF, bidders from non-Member Countries offering goods, works and related services (including transportation and insurance) are not eligible even if they offer these from Eligible Member Countries. Any waiver to this rule will be in accordance with the Articles 17(1) (d) of the Agreement Establishing the African Development Bank and 4.1 of the Agreement Establishing the Nigeria Trust Fund.

B. Rules and Procedures for Procurement of Goods and Works

Overview

- 1. The eligibility criteria for participation in the supply of goods, works and related services, to be procured through the ADB and NTF Financing, derive from the requirements of the Agreement Establishing the African Development Bank, Article 17.1.d, and the Agreement Establishing the Nigeria Trust Fund, Article 4.1. The foregoing requirements basically prescribe two types of eligibility criteria:
 - (a) The eligibility of the bidder;
 - (b) The eligibility of the goods, works and related services.

Eligibility of the Bidder under the ADB and NTF Financing

- 2. The eligibility of the bidder shall be based on nationality, in accordance with the following rules:
 - (a) <u>Natural Persons</u>: A natural person is eligible if he or she is a national of a Member Country of the ADB. Where a person has more than one nationality, such a person shall be eligible if the nationality indicated in his or her bid is that of a Member Country of the ADB.
 - (b) <u>Corporations</u>: A corporation is eligible if it satisfies the following criteria:
 - 1. it is incorporated in a country that is a Member of the ADB;
 - 2. it is a national of a country that is a Member of the ADB, as determined by the law of its place of incorporation;
 - 3. it has its principal place of business in a country that is a Member of the ADB.

Refer to Bank Procurement Framework for additional information on Eligibility.

² "Eligible Countries" shall mean: (a) in the case of the African Development Bank (ADB) and the Nigeria Trust Fund, the Member Countries of the ADB; and (b) in the case of the African Development Fund (ADF), any country.

(c) <u>Joint Ventures and Associations</u>: An unincorporated joint venture, partnership, or association, shall be eligible if more than 50% of the value of its works and/or services is executed by its members satisfying the eligibility requirements for individuals or corporations.

Eligibility of the Goods, Works and Related Services

- 3. In order to be eligible, the goods to be procured must have been mined, grown, or produced, in the form in which they are purchased, in an Eligible Member Country.
- 4. For works contracts, which may include civil works, plant construction, or turnkey contracts, the contractor must satisfy the nationality criteria of eligibility, either as a natural person, or corporation, or joint venture and association. Labour, equipment, and materials needed for carrying out the works contract, shall be supplied from Eligible Member Countries.
- 5. For contracts, which have been awarded on the basis of Cost, Insurance and Freight (CIF), or Carriage and Insurance Paid (CIP), bidders shall be free to arrange for ocean and other transportation, and the related insurance, from any Eligible Member Country. On the other hand, where goods are shipped on FOB basis, and the Bank has agreed to finance transportation and insurance separately, which are arranged by the purchaser, under a separate contract, the Bank shall be satisfied that the services are supplied from Eligible Member Countries.

List of Eligible Countries

6. List of Eligible countries can be found in African Development Bank's website:

https://www.afdb.org/en/about-us/corporate-information/members/

Ineligible Countries in reference to ITB 4.8 and ITB 5.1

7. In reference to ITB 4.8 and ITB 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.8(a) and ITB 5.1: [insert a list of the countries following approval by the Bank to apply the restriction or state "none"].

Under ITB 4.8(b) and ITB 5.1: [insert a list of the countries following approval by the Bank to apply the restriction or state "none"]

Section VI - Fraud and Corruption

1. Purpose

1.1 The Bank's Integrity Framework and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bankfinanced contracts, and refrain from Fraud and Corruption¹.

2.2 To this end, the Bank:

- a. Defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party²;
 - ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party³ to obtain financial or other benefit or to avoid an obligation;
 - iii. "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;
 - iv. "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;
 - v. "obstructive practice" is:
 - (a) 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
 - (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

¹ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

² For the purpose of this sub-paragraph, "another party" refers to a public official acting in relation to the procurement process or contract execution, including Bank staff and employees of other organizations taking or reviewing procurement decisions.

³ For the purpose of this sub-paragraph, "party" refers to a public official, including Bank staff and employees of other organizations taking or reviewing procurement decisions.; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution."

- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Banks Integrity Framework and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;4 (ii) to be a nominated5 sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants), consultants, contractors, and suppliers: and their subcontractors, sub-consultants, service providers, suppliers, agents, personnel, permit the Bank to inspect⁶ all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated subcontractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.



Section VII - Works' Requirements

Contents

Scope of Works	Error! Bookmark not defined.
Specification	124
Environmental and Social (ES) requirements	125
Contractor's Representative and Key Personnel	126
Drawings	128
Supplementary Information	129

Scope of Works

The works specified under this contract shall include

a) Matuu Cluster

- a. Construction of water treatment plant capacity 4000m3/day and associated Works.
- b. Testing of 835m DN280 existing and laying 445m DN280 Raw and Treated Water Rising Main
- c. Testing of 5km existing and laying of 24km DN 250 DN315 Treated Water Transmission Pipeline
- d. Testing of 24.2km existing and laying of 5.8km DN63 DN125 Water Distribution Pipeline with 1,000no. Consumer Connections
- e. construction of a 150KW Solar Farm

b) Kitui Cluster

- a. Testing of 1km existing and laying 6.5km of DN250 DN300 Sewer Pipeline with 500no. Consumer Connections and rehabilitation of 50no. sewer manholes
- b. Rehabilitation works of 2no. pump houses.

c) Wote Cluster.

- a. Construction of an intake weir across Kaiti River
- b. Construction of sump and filter gallery.
- c. Installation of valve and fitting and completion of road crossing for the rising main
- d. Construction of a 150KW solar farm.

All general and ancillary works and work of any nature that is deemed necessary for the due and satisfactory construction, completion and maintenance of the works to the full extent and meaning of the Drawings and Specifications, whilst complying with all general Conditions of Contract whether specifically mentioned or not in the clause of the specifications.

Some of the Works detailed in these special specifications are only indicative of the Scope of Works associated with this contract and the Engineer may, where necessary, substitute some of the Works with others within the project areas without substantially altering the overall Scope of the Works. Any other activity not listed above but deemed to be necessary by the Engineer shall be carried out subject to the Engineer's formal instructions. Works shall be measured and paid using the relevant rates and prices in the Bill of Quantities.

The works will also include for any operations necessary for the safe and convenient passage of traffic at all times.

Compliance with Specification.

All materials, plant, labour and workmanship in and connected with the execution of the works shall be the best of their respective kinds without regard to any trade terms and the Contractor shall comply with these and all other respects with the relevant Clauses in the Specification and shall carry out the Contract

Section VII: Works' Requirements Page 12	22
--	----

in a proper and workmanship like Drawings and Instructions of the Eng	manner gineer.	and	in s	strict	accorda	nce v	vith	Specifications,	Working

Specification

The Special Specifications are to be read in conjunction with the Standard Specification for Road and Bridge Construction, Ministry of Transport and Communications, 1986 and the General/Particular Conditions of this contract.

Refer to the separate Book of Specification for the Construction for Kitui Matuu Last mile Water Sanitation Projects referred to as **VOL. II EMPLOYER'S REQUIREMENTS.**

Section VII: Works' Requirements ______ Page | 124

Environmental and Social (ES) requirements

Refer to the separate Book of Specification for the Construction for Mwala Cluster Water Supply Projects referred to as VOL. II EMPLOYER'S REQUIREMENTS.		

Section VII: Works' Requirements ______ Page | 125

Contractor's Representative and Key Personnel

[Note: Insert in the following table, the minimum key specialists required to execute the contract, taking into account the nature, scope, complexity and risks of the contract.

Where Project SEA risks are assessed to be substantial or high, the Employer shall include a Sexual Exploitation, Abuse and Harassment expert(s).]

Contractor's Representatives and Key Personnel

Item No.	Position/Specialization	Relevant Academic Qualifications	Minimum Years of Relevant Work Experience
1	Project Director/Contractor's Representative	Degree in Civil Engineering. Water Engineering, Or Equivalent	10 Years
2	One (1) Project/Contract Manager	Civil Engineering Degree Registered with EBK Or Equivalent	7 Years
3	One (1) Site Agent	(Civil Engineering Degree & Registered with EBK Or Equivalent)	7 Years
4	Two (2) Assistant Site Agents One (1) For Intake and Water Treatment Works - One (1) For Water Pipelines and Water Reservoirs.	All Civil Engineering Degree and Graduate Engineers with EBK or equivalent	3 Years
5	One (1) Water Treatment Process Engineer	Civil Engineering Degree and Registered with EBK or equivalent	5 Years
6	Electromechanical Engineer	Degree in Electrical/ Mechanical Engineering and Registered with EBK or equivalent.	10 Years
7	Three (3) Construction Supervisors	Diploma in Water or Civil Engineering, Or Equivalent)	3 Year
8	One (1) Surveyor	Degree in Surveying - Registered with ISK Or Equivalent	5 Years

Section VII: Works' Requirements ______ Page | 126

9	One (1) Assistant Surveyor	With Minimum Ordinary Diploma (Ond) in Surveying	3 Years
10	Environmentalist	A Degree in Environmental Sciences or Equivalent and Registered Lead Expert with Nema.	5 Years
11	Occupational Safety and Health Officer	A First Degree and Course in Occupational Safety and Health	5 Years
12	2 No. Sociologists	A Degree in Social Sciences or Community Development	4 Years
13	Sexual Exploitation, Abuse and Harassment Officer.	Degree in Social Science with experience in handling gender-based issues.	5 Years

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.

Personnel for the listed positions should either:

- Be fluent in written and spoken English or
- At least one interpreter who is fluent in written and spoken English shall be provided by the contractor for every four personnel who are themselves not fluent in written and spoken English.

Drawings			
Refer to the separate Book of Drawings for the Construction for Kitui Matuu Last Mile Water and Sanitation Projects herein referred to as VOL. III BOOK OF DRAWINGS			

Section VII: Works' Requirements ______ Page | 128

Supplementary Information

Supplementary information comprise of the Materials Report and the Hydrological/ Hydraulics Report denoted as Volume (3A) and Volume (3B) of the Bidding Documents.

These reports are marked "FOR INFORMATION ONLY AND WILL NOT FORM PART OF THE CONTRACT".

These reports only represent investigations and findings, with/without analysis or interpretation of results/ findings of a consultant and it is the Bidder's responsibility for any source and quality of construction materials, without binding the Employer.

Part 3: Conditions of Contract & Contract Forms

Section VIII- Particular Conditions

The following Particular Conditions shall supplement the GC. Whenever there is a conflict, the provisions herein shall prevail over those in the GC.

Section IX: Particular Conditions ______ Page | 131

Particular Conditions

Part A – Contract Data

Conditions	Sub-Clause	Data
Where the Contract allows for Cost Plus Profit, percentage profit to be added to the Cost	1.1.20	10_%
Employer's name and address	1.1.31	Chief Executive Officer Athi Water Works Development Agency Athi Water Plaza, Muthaiga North Road, P.O Box 45283 - 00100 Nairobi, Kenya Tel: +254-20-2724292/3, 2711342 Fax: +254-20-2724295 Email: info@awwda.go.ke Website: www.awwda.go.ke
Engineer's name and address	1.1.35	Chief Executive Officer Tanathi Water Works Development Agency KIDP Building - Kalawa Road P.O Box Private Bag Kitui, Kenya
Bank's name	1.1.89	The Bank is: African Development Bank
Borrower's name	1.1.90	Government of Kenya
Time for Completion	1.1.84	548 days (18 months)
Defects Notification Period	1.1.27	365 days (one year)
Sections	1.1.73	N/A
Electronic transmission system	1.3 (a) (ii)	Email: info@awwda.go.ke
Address of Employer for communications:	1.3(d)	The Employer's address for the purpose of communications is: Chief Executive Officer Athi Water Works Development Agency Athi Water Plaza, Muthaiga North Road, P.O Box 45283 - 00100 Nairobi, Kenya Tel: +254-20-2724292/3, 2711342

Section IX: Particular Conditions ______ Page | 132

Conditions	Sub-Clause	Data
		Fax: +254-20-2724295 Email: info@awwda.go.ke
Address of Engineer for communications:	1.3(d)	Chief Executive Officer Tanathi Water Works Development Agency KIDP Building - Kalawa Road P.O Box Private Bag Kitui, Kenya
Address of Contractor for communications:	1.3(d)	
Governing Law	1.4	Laws of the Republic of Kenya
Ruling language	1.4	English
Language for communications	1.4	English
Time for the Parties to sign a Contract Agreement	1.6	28 days after receipt of the Letter of Acceptance
Number of additional paper copies of Contractor's Documents	1.8	3 (Three)
Total liability of the Contractor to the Employer under or in connection with the Contract	1.15	Accepted Contract Sum (sum)
Site	1.1 74	As Described in Specifications
		e) Maximum numbers of members in the Joint Venture, Consortium or Association (JV) shall not exceed 3.
Joint and Several Liability	1.14	(f) Minimum share of a member of Joint Venture, Consortium or Association (JV) in the contract shall not be less than 33% percent of the total value of the contract.
Time for access to the Site	2.1	28 days after Commencement Date
Sustainable procurement	4.1	N/A
Performance Security	4.2	The performance security will be in the form of unconditional bank guarantee acceptable to the employer in the amount(s) of 10% of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount.

Conditions	Sub-Clause	Data
Environmental and Social (ES) Performance Security	4.2	N/A
Period for notification of errors in the items of reference	4.7.2 (a)	28 Days
Period of payment for temporary utilities	4.19	28 Days
Number of additional paper copies of progress reports	4.20	3 (Three)
Maximum allowable accumulated value of work subcontracted (as a percentage of the Accepted Contract Amount or volume of work-as per provision made under BDS of ITB 34.2)	5.1(a)	30%
Parts of the Works for which subcontracting is not permitted	5.1(b)	N/A
Normal working hours	6.5	Normal working hours are: 8 hours per day from Monday to Friday and 5 hours on Saturday except Sundays and Public Holidays.
Number of additional paper copies of program	8.3	3
Delay damages payable for each day of delay	8.8	0.1% of the Accepted Contract Amount per day, less provisional sum, for DAAB.
Maximum amount of delay damages	8.8	10% of the Accepted Contract Amount less provisional sum for DAAB.
Method of measurement	12.2	Civil Engineering Standard Method of Measurement (CESMM)
Percentage profit	12.3	As stated under 1.1.20 above
Percentage rate to be applied to Provisional Sums for overhead charges and profit	13.4 (b)(ii)	_10 %
Adjustments for changes in cost	13.7	Adjustment for changes in cost shall not apply.
Total advance payment	14.2	15% Percentage of the Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable.

Conditions	Sub-Clause	Data
Repayment of Advance payment	14.2.3	a) Repayment to begin when the amount of certified works attains exceeds 20% of the portion of the Accepted Contract Amount payable in that currency less Provisional Sums
		b) deductions shall be completed when certified works reach 80% of the Contract Sum.
Number of additional paper copies of Statements	14.3(b)	3 (Three)
Percentage of retention	14.3(iii)	10% of interim payment certificates
Limit of Retention Money (as a percentage of Accepted Contract Amount)	14.3(iii)	10% of the Accepted Contract Amount
Plant and Materials	14.5(b)(i)	N/A
Trant and iviatorials	14.5(c)(i)	N/A
Minimum Amount of Interim Payment Certificates	14.6.2	5% of the Accepted Contract Amount.
Period of payment of Advance Payment to the Contractor	14.7(a)	72days
Period for the Employer to make interim payments to the Contractor under Sub-Clause 14.6 (interim Payment)	14.7b(i)	72days
Period for the Employer to make interim payments to the Contractor under Sub-Clause 14.13 (Final Payment)	14.7b(ii)	72days
Period for the Employer to make final payment to the Contractor	14.7(c)	72days
financing charges for delayed payment (percentage points above the average bank short- term lending rate as referred to under sub-paragraph (a))	14.8	N/A
Number of additional paper copies of draft Final Statement	14.11.1(b)	3 (Three)
Forces of nature, the risks of which are allocated to the Contractor	17.2(d)	N/A

Conditions	Sub-Clause	Data	
Permitted deductible limits	19.1	The minimum insurance amounts and deductibles shall be: insurance required for the Works: [KES. 3,000,000] insurance required for Goods: [KES. 5,000,000] insurance required for liability for breach of professional duty: [KES. 5,000,000] insurance required against liability for fitness for purpose (if any is required): N/A insurance required for injury to persons and damage to property: [KES. 3,000,000] insurance required for injury to employees: [KES. 5,000,000]	
Additional amount to be insured (as a percentage of the replacement value, if less or more than 15%)	19.2.1(b)	N/A	
List of Exceptional Risks which shall not be excluded from the insurance cover for the Works	19.2.1(iv)	N/A	
Extent of insurance required for Goods	19.2.2	As in 19.1 above	
Amount of insurance required for Goods	19.2.2	As in 19.1 above	
amount of insurance required for liability for breach of professional duty	19.2.3(a)	As in 19.1 above	
Insurance required against liability for fitness for purpose	19.2.3(b)	No	
Period of insurance required for liability for breach of professional duty	19.2.3	As in 19.1 above	
Amount of insurance required for injury to persons and damage to property	19.2.4	As in 19.1 above	
Other insurances required by Laws and by local practice (give details)		N/A	
Time for appointment of DAAB	21.1	42 days after signature by both parties of the Contract Agreement	
The DAAB shall be comprised of	21.1	Three Members	

Conditions	Sub-Clause	Data
List of proposed members of DAAB	21.1	Proposed by Employer [Attach CVs to the bidding document and the Contract] 1 2 3 Proposed by Contractor [Attach CVs to the Contract] 1 2 3
Appointment (if not agreed) to be made by	21.2	Chartered Institute of Arbitrators Kenya Chapter
Rules of arbitration	21.6(a)	Sub-Clause 21.6(a) of PART B – Specific Provisions shall apply.
	21.6 (b)	Sub-Clause 21.6(b) of PART B – Specific Provisions shall apply.
Place of arbitration	21.6(a)	Arusha, Tanzania

Table: Summary of Sections (if any)

Description of parts of the Works that shall be designated a Section for the purposes of the Contract (Sub-Clause 1.1.73)	Value: Percentage* of Accepted Contract Amount (Sub-Clause 14.9)	Time for Completion (Sub-Clause 1.1.84)	Delay Damages (Sub-Clause 8.8)

^{*}These percentages shall also be applied to each half of the Retention Money under Sub-Clause 14.9

Part B - Specific Provisions

Sub-Clause 1.1.10	"the Contractor's Proposal" is deleted.
Contract	
Sub-Clause 1.1.49	The Sub-Clause is replaced with: "I awa" means all national (or state) logical tion, statutes, ardinances
Laws	"Laws" means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally
	constituted public authority."
	Table and the same
Sub-Clause 1.1.74	The Sub-Clause is replaced with:
Site	"Site" means the places where the Permanent Works are to be
	executed, including storage and working area, and to which Plant and
	Materials are to be delivered, and any other places specified in the Contract as forming part of the Site."
	Contract as forming part of the Site.
Sub-Clause 1.1.77	On the second line after "Payment Certificate under", add "Sub-
Statement	Clause 14.2.1 [Advance Payment Guarantee] (if applicable),".
Sub-Clause 1.1.81	"the Contractor's Proposal" is deleted.
Tender	the Contractor's Proposar is defected.
Sub-Clause 1.1.89 to 1.1.91 ar	e added after Sub-Clause 1.1.88
Sub-Clause 1.1 89 Bank	"Bank" means the financing institution (if any) named in the
Sub Chause III 05 Bank	Contract Data.
Sub-Clause 1.1.90	"Borrower" means the person (if any) named as the borrower in the
Borrower	Contract Data.
Sub-Clause 1.1.91	"ES" means Environmental and Social (including Sexual
ES	Exploitation and Assault (SEA)).
ES	Emploitation and Hisbault (SEH1)).

Sub-Clause 1.1.92 "Sexual Exploitation and Abuse" "(SEA)" and Sexual **Sexual Exploitation and** Harassment (HS) mean the following: Abuse (SEA), and Sexual **Sexual Exploitation** is defined as any actual or attempted abuse Harassment (SH) of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another. Sexual Abuse is defined as the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions; and "Sexual Harassment" "(SH)" is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature by the Contractor's Personnel with other Contractor's or Employer's Personnel. **Sub-Clause 1.2** Sub-paragraph (a) is replaced with the following: Interpretation (a) "Words indicating one gender include all genders; "he/she" is replaced with: "it"; "him/her" is replaced with "it"; "his" and "his/her" are replaced with: "its"; "himself/herself" are replaced with: "itself"." Further, "and" is deleted from the end of sub-paragraph (i) and added at the end of sub-paragraph (j). sub-paragraph (k) is added: (k) "The word "tender" is synonymous with "bid" or "proposal", the word tenderer with "bidder" or "proposer" and the words "tender documents" with "request for bids documents" or

"request for proposal documents", as applicable."

Sub-Clause 1.5 Priority of Documents	The following documents are added in the list of Priority Documents after (e):
	"(f) the Particular Conditions Part C- Fraud and Corruption;
	(g) the Particular Conditions Part D- Environmental and Social (ES) Metrics for Progress Reports;"
	and the list renumbered accordingly.
Sub-Clause 1.6 Contract Agreement	The last paragraph is replaced with:
Contract Agreement	"If the Contractor comprises a JV, the authorised representative of the JV shall sign the Contract Agreement in accordance with sub – clauses 1.14 (Joint and Several Liability)."
Sub-Clause 1.12 Confidentiality	The following is added at the end of the second paragraph: "The Contractor shall be permitted to disclose information required to establish its qualifications to compete for other projects." "or" at the end of (b) is deleted.
	"or" at the end of (c) is added.
	The following is then added as (d): "is being provided to the Bank."
Sub-Clause 1.17 Inspections & Audit by the	The following Sub-Clause is added after Sub-Clause 1.16:
Bank	"Pursuant to paragraph 2.2 e. of Particular Conditions - Part C- Fraud and Corruption, the Contractor shall permit and shall cause its agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit, the Bank and/or persons appointed by the Bank to inspect the site and/or the accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have such accounts, records and other documents audited by auditors appointed by the Bank. The Contractor's and its Subcontractors' and subconsultants' attention is drawn to Sub-Clause 15.8 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures)."
Sub-Clause 2.4	The first paragraph is replaced with:

Employer's Financial Arrangements

"The Employer shall submit, before the Commencement Date, reasonable evidence that financial arrangements have been made for financing the Employer's obligations under the Contract."

The following sub-paragraph is added at the end of Sub-Clause 2.4: "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 its notice of the extent to which such funds will be available."

Sub-Clause 2.6 Employer-Supplied Materials and Employer's Equipment

[If Employer- Supplied Materials are listed in the Employer's Requirements for the Contractor's use in the execution of Works, the following provisions may be added]:

The following is added after the last paragraph of Sub-Clause 2.6:

"The Employer shall supply to the Contractor the Employer-Supplied Materials listed in the Specification, at the time(s) stated in the Specification (if not stated, within the times that shall be required to enable the Contractor to proceed with execution of the Works in accordance with the Programme).

When made available by the Employer, the Contractor shall visually inspect the Employer-Supplied Materials and shall promptly give a Notice to the Engineer of any shortage, defect or default in them. Thereafter, the Contractor shall rectify such shortage, defect or default to the extent instructed by the Engineer. Such instruction shall be deemed to have been given under Sub-Clause 13.3.1 [Variation by Instruction].

After this visual inspection, the Employer-Supplied 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 of any shortage, defect or default not apparent from a visual inspection."

[If Employer's Equipment are listed in the Specification for the Contractor's use in the execution of Works, the following provisions may be added]:

The following is added after the last paragraph of Sub-Clause 2.6:

"The Employer shall make the Employer's Equipment listed in the Specification available to the Contractor at the time(s) stated in the Specification (if not stated, within the times that shall be required to enable the Contractor to proceed with execution of the Works in accordance with the Programme). Unless expressly stated otherwise in the Specification, the Employer's Equipment shall be provided for the exclusive use of the Contractor. When made available by the Employer, the Contractor shall visually inspect the Employer's Equipment and shall promptly give a Notice to the Engineer of any shortage, defect or default in them. Thereafter, the Contractor shall rectify such shortage, defect or default to the extent instructed by the Engineer. Such instruction shall be deemed to have been given under Sub-Clause 13.3.1 [Variation by *Instruction*]. The Contractor shall be responsible for the Employer's Equipment while it is under the Contractor's control and/or any of the Contractor's Personnel is operating it, driving it, directing it, using it, or in control of it. The Contractor shall not remove from the Site any items of the Employer's Equipment without the consent of the Employer. However, consent shall not be required for vehicles transporting Goods or Contractor's personnel to or from the Site." Sub-Clause 3.1 The following is added at the end of the first sub-paragraph: "The Engineer's staff shall include suitably qualified engineers and The Engineer other professionals who are competent to carry out these duties." The Engineer shall obtain the consent in writing of the Employer **Sub-Clause 3.2** before taking action under the following Sub-Clauses of these **Engineer's Duties and** Conditions: Authority Sub-Clause 13.1: Right to vary - instructing a variation, (a) except; in an emergency situation as determined by the (i) Engineer; or (if such a Variation would increase the Accepted (ii) Contract Amount by less than the percentage specified in the Contract Data. Sub-Clause 13.2 (Value Engineering): stating consent or (b) otherwise to a value engineering proposal submitted by the Contractor in accordance with Sub-Clause 13.2.

	Notwithstanding the obligation, as set out above, to obtain consent in writing, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, it 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 consent 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, and EOT if any, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Employer.
Sub-Clause 3.3 Engineer's Representative	The following is added at the end of Sub-Clause 3.3: "The Engineer shall obtain the consent of the Employer before
	appointing or replacing an Engineer's Representative."
Sub-Clause 3.4 Delegation by the Engineer	The following is added at the end of the second paragraph: "If any assistants are not fluent in this language, the Engineer shall make competent interpreters available during all working hours, in a number sufficient for those assistants to properly perform their assigned duties and/or exercise their delegated authority."
Sub-Clause 3.6 Replacement of the Engineer	In the first paragraph, "42 days" is replaced with: "21 days"; In the third para, "shall" is replaced with: "should".
Sub-Clause 4.1 Contractor's General Obligations	The following is inserted after the paragraph "The Contractor shall provide the Plant (and spare parts, if any)": "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 following is inserted after the paragraph "The Contractor shall, whenever required by the Engineer": The Contractor shall not carry out mobilization to Site (e.g. limited clearance for haul roads, site accesses and work site establishment, geotechnical investigations or investigations to select ancillary features such as quarries and borrow pits) unless the Engineer gives consent, a consent that shall not be unreasonably delayed, that appropriate measures are in place to address environmental and social risks and impacts, which at a minimum shall include

applying the Management Strategies and Implementation Plans (MSIPs) and Code of Conduct for Contractor's Personnel submitted as part of the Bid and agreed as part of the Contract.

The Contractor shall submit, to the Engineer for Review any additional MSIPs as are necessary to manage the ES risks and impacts of ongoing Works (e.g. excavation, earth works, bridge and structure works, stream and road diversions, quarrying or extraction of materials, concrete batching and asphalt manufacture). These MSIPs collectively comprise the Contractor's Environmental and Social Management Plan (C-ESMP). The Contractor shall review the C-ESMP, periodically (but not less than every six (6) months), and update it as required to ensure that it contains measures appropriate to the Works. The updated C-ESMP shall be submitted to the Engineer for Review

The C-ESMP shall be part of the Contractor's Documents. The procedures for Review of the C-ESMP and its updates shall be as described in Sub-Clause 4.4.1 [Preparation and Review].

The following is added as (g); (g) and (h) of the Sub-Clause are then renumbered as (h) and (i) respectively.

- (g) if so stated in the Specification, the Contractor shall:
 - (i) design structural elements of the Works taking into account climate change considerations;
 - (ii) apply the concept of universal access (the concept of universal access means unimpeded access for people of all ages and abilities in different situations and under various circumstances;
 - (iii) consider the incremental risks of the public's potential exposure to operational accidents or natural hazards, including extreme weather events; and
 - (iv) any other requirement stated in the Specification."

The following is added at the end of the Sub-Clause:

"The Contractor shall provide relevant contract- related information, as the Employer and/or Engineer may reasonably request to conduct Stakeholder engagements. "Stakeholder" refers to individuals or groups who:

- (i) are affected or likely to be affected by the Contract; and
- (ii) may have ab interest in the Contract.

The Contractor may also directly participate in Stakeholder engagements, as the Employer and/or Engineer may reasonably request."

Sub-Clause 4.2 The first paragraph is replaced with: **Performance Security and** "The Contractor shall obtain (at its cost) a Performance Security for **ES Performance Security** proper performance and, if applicable, an Environmental and Social (ES) Performance Security for compliance with the Contractor's ES obligations, in the amounts 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 amounts are not stated in the Contract Data, this Sub-Clause shall not apply." In the following Sub-Clauses of the General Conditions, the term "Performance Security" is replaced with: "Performance Security and, if applicable, an Environmental and Social (ES) Performance Security": 2.1- Right of Access to the Site; 14.2- Advance Payment; 14.6- Issue of IPC; 14.12- Discharge; 14.13- Issue of FPC; 14.14 Cessation of Employer's Liability; 15.2- Termination for Contractor's Default; 15.5- Termination for Employer's Convenience. Sub-Clause 4.2.1 The first paragraph is replaced with: Contractor's "The Contractor shall deliver the Performance Security and, if obligations applicable, an ES 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 ES Performance Security shall be issued by a reputable bank 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." Thereafter, throughout Sub-Clause 4.2 "Performance Security" is replaced with: "Performance Security and, if applicable, ES Performance Security."

Sub-Clause 4.2.2 Claims under the Performance Security	The first paragraph is replaced in its entirety with: "The Employer shall not make a claim under the Performance Security, except for amounts for which the Employer is entitled under the Contract."
Sub-Clause 4.2.3 Return of Performance Security	In sub-paragraph (a) "21 days" is replaced with: "28 days".
Sub-Clause 4.3 Contractor's Representative	The following is added at the end of the last paragraph: "If any of these persons is not fluent in this language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer."
Sub-Clause 4.6 Co-operation	On the second-last line of the first paragraph before "Contractor's", add "of the".
	The following is added after the first paragraph:
	"The Contractor shall also, as stated in the Specification or as instructed by the Engineer, cooperate with and allow appropriate opportunities for the Employer's Personnel to conduct any environmental and social assessment.
Sub-Clause 4.7 Setting out	In the second bullet-point of sub-paragraph (b) of Sub-Clause 4.7.3:
Setting out	 before "if the items of reference", add: "when examining the items of reference within the period stated in sub-paragraph (a) of Sub-Clause 4.7.2" On the second and third lines, the following is deleted "and the contractor's Notice is given after the period stated in sub-paragraph (a) of Sub-Clause 4.7.2".
Sub-Clause 4.8 Health and Safety Obligations	The following are included after deleting "and" at the end of (f) and replacing "." with ";" at the end of (g): (h) provide health and safety training of Contractor's Personnel as appropriate and maintain training records; (i) actively engage the Contractor's Personnel in promoting understanding, and methods for, implementation of health and safety requirements, as well as in providing information to Contractor's Personnel, training on occupational safety and health, and provision of personal protective equipment without expense to the

- (j) put in place workplace processes for Contractor's Personnel to report work situations that they believe are not safe or healthy, and to remove themselves from a work situation which they have reasonable justification to believe presents an imminent and serious danger to their life or health.
- (k) Contractor's Personnel who remove themselves from such work situations shall not be required to return to work until necessary remedial action to correct the situation has been taken. Contractor's Personnel shall not be retaliated against or otherwise subject to reprisal or negative action for such reporting or removal;
- (l) subject to Sub-Clause 4.6, collaborate with the entities and Personnel under paragraph (a) , (b) and (c) of Sub-Clause 4.6, in applying the health and safety requirements. This is without prejudice to the responsibility of the relevant entities for the health and safety of their own personnel; and
- (m) establish and implement a system for regular (not less than six-monthly) review of health and safety performance and the working environment."

The second and third paragraphs are replaced with the following:

"Subject to Sub-Clause 4.1, the Contractor shall submit to the Engineer for Review a health and safety manual which has been specifically prepared for the Works, the Site and other places (if any) where the Contractor intends to execute the Works. The procedures for Review of the health and safety manual and its updates shall be as described in Sub-Clause 4.4.1 [Preparation and Review].

The health and safety manual shall be in addition to any other similar document required under applicable health and safety regulations and Laws.

The health and safety manual shall set out all the health and safety requirements under the Contract,

- (a) which shall include at a minimum:
 - (i) the procedures to establish and maintain a safe working environment without risk to health at all workplaces, machinery, equipment and processes under the control of the Contractor, including control measures for chemical, physical and biological substances and agents;
 - (ii) details of the training to be provided, records to be kept;
 - (iii) the procedures for prevention, preparedness and response activities to be implemented in the case

	(iv)	of an emergency event (i.e. an unanticipated incident, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks or spills, which may occur for a variety of different reasons including failure to implement operating procedures that are designed to prevent their occurrence, extreme weather or lack of early warning); the measures to be taken to avoid or minimize the potential for community exposure to water-borne, water-based, water-related, and vector-borne
	(v)	the measures to be implemented to avoid or minimize the spread of communicable diseases (including transfer of Sexually Transmitted Diseases or Infections (STDs), such as HIV virus) and non-communicable diseases associated with the execution of the Works, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups. This includes taking measures to avoid or minimize the transmission of communicable diseases that may be associated with the influx of temporary or
	(vi)	permanent Contract-related labour; the policies and procedures on the management and quality of accommodation and welfare facilities if such accommodation and welfare facilities are provided by the Contractor in accordance with Sub-Clause 6.6; and
	(b) any of	her requirements stated in the Specification.
	requirement of.	starting with: "In addition to the reporting" is deleted and replaced with the addition to GC in Sub-Clause 4.20 of the Special Provisions.
Sub-Clause 4.15 Access Route	"The Contractor occurrence of inc the use of Contr infrastructure. The Contractor sidentify negative	added at the end of Sub-Clause 4.15: shall take all necessary safety measures to avoid the idents and injuries to any third party associated with actor's Equipment on public roads or other public shall monitor road safety incidents and accidents to e safety issues, and establish and implement res to resolve them."
Sub-Clause 4.18 Protection of the Environment	"The Contractor	Protection of the Environment is replaced with: shall take all necessary measures to: ne environment (both on and off the Site); and

(b) limit damage and nuisance to people and property resulting from pollution, noise and other results of the Contractor's operations and/ or activities.

The Contractor shall ensure that emissions, surface discharges, effluent and any other pollutants from the Contractor's activities shall exceed neither the values indicated in the Specification, nor those prescribed by applicable Laws.

In the event of damage to the environment, property and/or nuisance to people, on or off Site as a result of the Contractor's operations, the Contractor shall agree with the Engineer the appropriate actions and time scale to remedy, as practicable, the damaged environment to its former condition. The Contractor shall implement such remedies at its cost to the satisfaction of the Engineer."

Sub-Clause 4.20 Progress Reports

Replace "4.20 (g) with: "the Environmental and Social (ES) metrics set out in Particular Conditions - Part D"

The following is added at the end of the Sub-Clause:

"In addition to the reporting requirement of this sub-paragraph (g) of Sub-Clause 4.20 [Progress Reports] the Contractor shall inform the Engineer immediately of any allegation, incident or accident, which has or is likely to have a significant adverse effect on the environment, the affected communities, the public, Employer's Personnel or Contractor's Personnel. This includes, but is not limited to, any incident or accident causing fatality or serious injury; significant adverse effects or damage to private property; or any allegation of SEA and/or SH. In case of SEA and/or SH, while maintaining confidentiality as appropriate, the type of allegation (sexual exploitation, sexual abuse or sexual harassment), gender and age of the person who experienced the alleged incident should be included in the information.

The Contractor, upon becoming aware of the allegation, incident or accident, shall also immediately inform the Engineer of any such incident or accident on the Subcontractors' or suppliers' premises relating to the Works which has or is likely to have a significant adverse effect on the environment, the affected communities, the public, Employer's Personnel or Contractor's, its Subcontractors' and suppliers' personnel. The notification shall provide sufficient detail regarding such incidents or accidents. The Contractor shall provide full details of such incidents or accidents to the Engineer within the timeframe agreed with the Engineer.

The Contractor shall require its Subcontractors and suppliers (other than Subcontractors) to immediately notify the Contractor of any incidents or accidents referred to in this Subclause."

Sub-Clause 4.21 Sub-Clause 4.21 Security of the Site is replaced with: "Sub-Clause 4.21 Security of the Site **Security of the Site** The Contractor shall be responsible for the security of the Site, and: (a) for keeping unauthorised persons off the Site; (b) authorised persons shall be limited to the Contractor's Personnel, the Employer's Personnel, and to any other personnel identified as authorised personnel (including the Employer's other contractors on the Site), by a Notice from the Employer or the Engineer to the Contractor. Subject to Sub-Clause 4.1, the Contractor shall submit for the Engineer's No-objection a security management plan that sets out the security arrangements for the Site. The Contractor shall (i) conduct appropriate background checks on any personnel retained to provide security; (ii) train the security personnel adequately (or determine that they are properly trained) in the use of force (and where applicable, firearms), and appropriate conduct towards Contractor's Personnel, Employer's Personnel and affected communities; and (iii) require the security personnel to act within the applicable Laws and any requirements set out in the Specification. The Contractor shall not permit any use of force by security personnel in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat. In making security arrangements, the Contractor shall also comply with any additional requirements stated in the Specification." **Sub-Clause 4.22** On the third line of the second paragraph before "4.17", "Sub-Clause" is added. **Contractor's Operations** on Site The first paragraph is replaced with the following: **Sub-Clause 4.23** "All fossils, coins, articles of value or antiquity, structures, groups of Archaeological and structures, and other remains or items of geological, archaeological, **Geological Findings** paleontological, historical, architectural or religious interest found on the Site shall be placed under the care and custody of the Employer. The Contractor shall: (a) take all reasonable precautions, including fencing-off the area or site of the finding, to avoid further disturbance and prevent Contractor's Personnel or other persons from removing or damaging any of these findings; (b) train relevant Contractor's Personnel on appropriate actions to be taken in the event of such findings; and (c) implement any other action consistent with the requirements of the Specification and relevant Laws."

Sub-Clause 4.24 Suppliers (other than Subcontractors)

4.24.1 Forced Labour

The Contractor shall take measures to require its suppliers (other than Subcontractors) not to employ or engage forced labour including trafficked persons as described in Sub-Clause 6.21. If forced labour/trafficking cases are identified, the Contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

4.24.2 Child labour

The Contractor shall take measures to require its suppliers (other than Subcontractors) not to employ or engage child labour as described in Sub-Clause 6.22. If child labour cases are identified, the Contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

4.24.3 Serious Safety Issues

The Contractor, including its Subcontractors, shall comply with all applicable safety obligations, including as stated in Sub-Clauses 4.8, 5.1 and 6.7. The Contractor shall also take measures to require its suppliers (other than Subcontractors) to adopt procedures and mitigation measures adequate to address safety issues related to their personnel. If serious safety issues are identified, the Contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

4.24.4 Obtaining natural resource materials in relation to supplier

The Contractor shall obtain natural resource materials from suppliers that can demonstrate, through compliance with the applicable verification and/ or certification requirements, that obtaining such materials is not contributing to the risk of significant conversion or significant degradation of natural or critical habitats such as unsustainably harvested wood products, gravel or sand extraction from river beds or beaches.

If a supplier cannot continue to demonstrate that obtaining such materials is not contributing to the risk of significant conversion or significant degradation of natural or critical habitats, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to demonstrate that they are not significantly adversely impacting the habitats.

Sub-Clause 4.25 Code of Conduct	The Contractor shall have a Code of Conduct for the Contractor's Personnel.
	The Contractor shall take all necessary measures to ensure that each Contractor's Personnel is made aware of the Code of Conduct including specific behaviors that are prohibited, and understands the consequences of engaging in such prohibited behaviors.
	These measures include providing instructions and documentation that can be understood by the Contractor's Personnel and seeking to obtain that person's signature acknowledging receipt of such instructions and/or documentation, as appropriate.
	The Contractor shall also ensure that the Code of Conduct is visibly displayed in multiple locations on the Site and any other place where the Works will be carried out, as well as in areas outside the Site accessible to the local community and project affected people. The posted Code of Conduct shall be provided in languages comprehensible to Contractor's Personnel, Employer's Personnel and the local community.
	The Contractor's Management Strategy and Implementation Plans shall include appropriate processes for the Contractor to verify compliance with these obligations.
Sub-Clause 5.1 Subcontractors	The following is added at the beginning of the second paragraph.
Subcontractors	"The Contractor shall require that its Subcontractors execute the Works in accordance with the Contract, including complying with the relevant ES requirements and the obligations set out in Sub-Clause 4.25 above."
	The following is added at the end of the last paragraph of Sub-Clause 5.1:
	"All subcontracts relating to the Works shall include provisions which entitle the Employer to require the subcontract to be assigned to the Employer under sub-paragraph (a) of Sub-Clause 15.2.3 [After Termination]. Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from the Country to be appointed as Subcontractors."
Sub-Clause 5.2.2 Objection to Nomination	In sub-paragraph (a), on the first line before "Subcontractor", "nominated" is added.

In sub-paragraph (c): "and" is deleted from the end of (i); "." at the end of (ii) is replaced with: ", and". The following is then added as (iii): "(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 5.2.3 [Payment to nominated Subcontractors]." The following paragraphs are added at the end of the Sub-Clause: **Sub-Clause 6.1 Engagement of Staff and** The Contractor shall provide the Contractor's Personnel information Labour and documentation that are clear and understandable regarding their terms and conditions of employment. The information and documentation shall set out their rights under relevant labour Laws applicable to the Contractor's Personnel (which will include any applicable collective agreements), including their rights related to hours of work, wages, overtime, compensation and benefits, as well as those arising from any requirements in the Specification. The Contractor's Personnel shall be informed when any material changes to their terms or conditions of employment occur. "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." The following paragraphs are added at the end of the Sub-Clause: **Sub-Clause 6.2** Rates of Wages and **Conditions of Labour** "The Contractor shall inform the Contractor's Personnel about: (a) any deduction to their payment and the conditions of such deductions in accordance with the applicable Laws or as stated in the Specification; and (b) 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. The Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws. Where required by applicable Laws or as stated in the Specification, the Contractor shall provide the Contractor's Personnel written notice of termination of employment and details of severance payments in a timely manner. The Contractor shall have paid the Contractor's Personnel (either directly or where appropriate for their benefit) all due wages and entitlements including, as applicable,

	social security benefits and pension contributions, on or before the end of their engagement/ employment."
Sub-Clause 6.5 Working Hours	The following is inserted at the end of the Sub-Clause: "The Contractor shall provide the Contractor's Personnel annual holiday and sick, maternity and family leave, as required by applicable Laws or as stated in the Specification."
Sub-Clause 6.6 Facilities for Staff and Labour	The following is added as the last paragraph: "If stated in the Specification, the Contractor shall give access to or provide services that accommodate the physical, social and cultural needs of the Contractor's Personnel. The Contractor shall also provide similar facilities for the Employer's Personnel as stated in the Specification."
Sub-Clause 6.7 Health and Safety of Personnel	In the second paragraph, "The Contractor" is replaced with: "Except as otherwise stated in the Specification, the Contractor"
Sub-Clause 6.9 Contractor's Personnel	The Sub-Clause is replaced with: "The Contractor's Personnel (including Key Personnel, if any) shall be appropriately qualified, skilled, experienced and competent 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 and Key Personnel (if any), who: (a) persists in any misconduct or lack of care; (b) carries out duties incompetently or negligently; (c) fails to comply with any provision of the Contract; (d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment; (e) based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Works; (f) has been recruited from the Employer's Personnel in breach of Sub-Clause 6.3 [Recruitment of Persons]; (g) undertakes behavior which breaches the Code of Conduct for Contractor's Personnel (ES). If appropriate, the Contractor shall then promptly appoint (or cause to be appointed) a suitable replacement with equivalent skills and experience. In the case of replacement of the Contractor's Representative] shall

	1 7 1 0 1 0 77 7 1 (20) 6 1
	apply. In the case of replacement of Key Personnel (if any), Sub-Clause 6.12 [Key Personnel] shall apply.
	Subject to the requirements in Sub-Clause 4.3 [Contractor's Representative] and 6.12 [Key Personnel], and notwithstanding any requirement from the Engineer to remove or cause to remove any person, the Contractor shall take immediate action as appropriate in response to any violation of (a) through (g) above. Such immediate action shall include removing (or causing to be removed) from the Site or other places where the Works are being carried out, any Contractor's Personnel who engages in (a), (b), (c), (d), (e) or (g) above or has been recruited as stated in (f) above."
Sub-Clause 6.12	The following is inserted at the end of the last paragraph:
Key Personnel	"If any of the Key Personnel are not fluent in this language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer."
The following Sub-Clauses 6.	13 to 6.27 are added after sub-clause 6.12
Sub-Clause 6.13 Foreign Personnel	The Contractor may bring into 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 its best endeavors 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. 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.
Sub-Clause 6.14 Supply of Foodstuffs	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.
Sub-Clause 6.15 Supply of Water	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.
Sub-Clause 6.16 Measures against Insect and Pest Nuisance	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.
Sub-Clause 6.17 Alcoholic Liquor or Drugs	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 thereto by Contractor's Personnel.
Sub-Clause 6.18 Arms and Ammunition	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.
Sub-Clause 6.19 Festivals and Religious Customs	The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.
Sub-Clause 6.20 Funeral Arrangements	The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of its local employees who may die while engaged upon the Works.
Sub-Clause 6.21 Forced Labour	The Contractor, including its Subcontractors, shall not employ or engage forced labour. Forced labour 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. No persons shall be employed or engaged who have been subject to trafficking. Trafficking in persons is defined as the recruitment, transportation, transfer, harbouring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation.
Sub-Clause 6.22 Child Labour	The Contractor, including its Subcontractors, shall not employ or engage a child under the age of 14 unless the national law specifies a higher age (the minimum age). The Contractor, including its Subcontractors, shall not employ or engage a child between the minimum age and the age of 18 in a manner that 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. The Contractor including its Subcontractors, shall only employ or engage children between the minimum age and the age of 18 after an

appropriate risk assessment has been conducted by the Contractor with the Engineer's consent. The Contractor shall be subject to regular monitoring by the Engineer that includes monitoring of health, working conditions and hours of work. Work considered hazardous for children is work that, by its nature or the circumstances in which it is carried out, is likely to jeopardize the health, safety, or morals of children. Such work activities prohibited for children include work: (a) with exposure to physical, psychological or sexual abuse; (b) underground, underwater, working at heights or in confined (c) with dangerous machinery, equipment or tools, or involving handling or transport of heavy loads; (d) in unhealthy environments exposing children to hazardous substances, agents, or processes, or to temperatures, noise or vibration damaging to health; or (e) under difficult conditions such as work for long hours, during the night or in confinement on the premises of the employer. The Contractor shall keep complete and accurate records of the **Sub-Clause 6.23** employment of labour at the Site. The records shall include the **Employment Records of** names, ages, genders, hours worked, and wages paid to all workers. Workers These records shall be summarised on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment]. In countries where the relevant labour laws recognise workers' rights Sub-Clause 6.24 to form and to join workers' organisations of their choosing and to **Workers' Organisations** bargain collectively without interference, the Contractor shall comply with such laws. In such circumstances, the role of legally established workers' organizations and legitimate workers' representatives will be respected, and they will be provided with information needed for meaningful negotiation in a timely manner. 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. The Contractor shall not seek to influence or control these alternative means. The Contractor shall not discriminate or retaliate against the Contractor's Personnel who participate, or seek to participate, in such organisations and collective bargaining or alternative mechanisms. Workers' organisations are expected to fairly represent the workers in the workforce. Sub-Clause 6.25 The Contractor shall not make decisions relating to the employment or treatment of Contractor's Personnel on the basis of personal characteristics unrelated to inherent job requirements. The

Non-Discrimination and Contractor shall base the employment of Contractor's Personnel on **Equal Opportunity** the principle of equal opportunity and fair treatment, and shall not discriminate with respect to any aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices. 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. The Contractor shall provide protection and assistance as necessary to ensure non-discrimination and equal opportunity, including for specific groups such as women, people with disabilities, migrant workers and children (of working age in accordance with Sub-Clause 6.22). The Contractor shall have a grievance mechanism for Contractor's **Sub-Clause 6.26 Contractor's Personnel** Personnel, and where relevant the workers' organizations stated in Sub-Clause 6.24, to raise workplace concerns. The grievance **Grievance Mechanism** mechanism shall be proportionate to the nature, scale, risks and impacts of the Contract. The mechanism shall address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned in a language they understand, without any retribution, and shall operate in an independent and objective manner. The Contractor's Personnel shall be informed of the grievance mechanism at the time of engagement for the Contract, and the measures put in place to protect them against any reprisal for its use. Measures will be put in place to make the grievance mechanism easily accessible to all Contractor's Personnel. The grievance mechanism shall not impede access to other judicial or administrative remedies that might be available, or substitute for grievance mechanisms provided through collective agreements. The grievance mechanism may utilize existing grievance mechanisms, providing that they are properly designed and implemented, address concerns promptly, and are readily accessible to such project workers. Existing grievance mechanisms may be supplemented as needed with Contract-specific arrangements. **Sub-Clause 6.27** The Contractor shall provide appropriate training to relevant Contractor's Personnel on ES aspects of the Contract, including **Training of Contractor's** appropriate sensitization on prohibition of SEA, and health and Personnel safety training referred to in Sub-Clause 4.8

As stated in the Specification or as instructed by the Engineer, the Contractor shall also allow appropriate opportunities for the relevant

Sub-Clause 7.3 Inspection	Contractor's Personnel to be trained on ES aspects of the Contract by the Employer's Personnel. The Contractor shall provide training on SEA, including its prevention, to any of its personnel who has a role to supervise other Contractor's Personnel. The following is added in the first paragraph after "Employer's Personnel" "(including the Bank staff or consultants acting on the Bank's behalf, stakeholders and third parties, such as independent experts, local communities, or non-governmental organizations)" The following is added as (b) (iv): "(iv) carryout environmental and social audit, and"
Sub-Clause 7.7 Ownership of Plant and Materials	The following is added before the first paragraph: "Except as otherwise provided in the Contract,"
Sub-Clause 8.1 Commencement of Work	 The Sub- Clause is replaced in its entirety with the following: "The Engineer shall give a Notice to the Contractor stating the Commencement Date, not less than 14 days before the Commencement Date. The Notice shall be issued promptly after the Engineer determines the fulfilment of the following conditions: (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; Subject to Sub-Clause 4.1 on the Management Strategies and Implementation Plans and the C-ESMP and Sub-Clause 4.8 on the health and safety manual, 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."
Sub-Clause 11.7	In the second paragraph, "Whenever the Contractor intends to access any part of the Works during the relevant DNP:" is replaced with:

Right of Access after Taking Over	"Whenever, until the date 28 days after issue of the Performance Certificate, the Contractor intends to access any part of the Works:"
Sub-Clause 13.3.1 Variation by Instruction	Subparagraph 13.3.1 (a) is replaced with: "a description of the varied work performed or to be performed, including details of the resources and methods adopted or to be adopted by the Contractor, and sufficient ES information to enable an evaluation of ES risks and impacts;"
Sub-Clause 13.4 Provisional Sums	The following is inserted as the penultimate paragraph: "The Provisional Sum shall be used to cover the Employer's share of the DAAB members' fees and expenses, in accordance with Clause 21. No prior instruction of the Engineer shall be required with respect to the work of the DAAB. The Contractor shall submit the DAAB members' invoices and satisfactory evidence of having paid 100% of such invoices as part of the substantiation of those Statements submitted under Sub-Clause 14.3.
Sub-Clause 13.6 Adjustments for Changes in Laws	The following paragraph is added at the end of the Sub-Clause: "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 13.7 [Adjustments for Changes in Cost]."
Sub-Clause 13.7 Adjustments for changes in Cost	Add the following paragraph at the end only if Contract Data specifies adjustment shall apply. Otherwise, prices shall be fixed during the duration of the Contract: Schedule of Cost Indexation: Formula for Adjustment for Change in Cost: Pn = a + b Ln/ Lo + c En/Eo + d Mn/Mo + where: "Pn" 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", 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;

"Ln", "En", "Mn", ... 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

"Lo", "Eo", "Mo", ... 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 (quoted in the fourth and fifth columns respectively of the table)

If the currency in which the Contract price is expressed is different from the currency of the country of origin of the indices, a correction factor will be applied to avoid incorrect adjustments of the Contract price. The correction factor shall be: Z_0 / Z_1 , where,

 Z_0 = the number of units of currency of the origin of the indices which equal to one unit of the currency of the Contract Price on the Base date, and

 Z_1 = the number of units of currency of the origin of the indices which equal to one unit of the currency of the Contract Price on the Date of Adjustment.

[Note to the Employer: include one of the following two alternative texts as applicable]

The following is added at the end of the Sub-Clause:

[Alternative 1]

"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."

[Alternative 2]

"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

Sub-Clause 14.1 The Contract Price

	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. 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 (s 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 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 of the 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."
Sub-Clause 14.2.1 Advance Payment Guarantee	The first paragraph is replaced with: "The Contractor shall obtain (at the Contractor's cost) an Advance Payment Guarantee in amounts and currencies equal to the advance payment, and shall submit it to the Employer with a copy to the Engineer. This guarantee shall be issued by reputable bank or financial institution selected by the Contractor and shall be based on the sample form annexed to the Particular Conditions or in another form agreed by the Employer (but such agreement shall not relieve the Contractor from any obligation under this Sub-Clause)."
Sub-Clause 14.3 Application for Interim Payment	The following is inserted at the end of (vi) after: [Agreement or Determination]: "any reimbursement due to the Contractor under the Dispute Avoidance/ Adjudication Agreement. (Appendix General Conditions of Dispute Avoidance/ Adjudication Agreement)."
Sub-Clause 14.6.2 Withholding (amounts in) an IPC	 "and/or" from subparagraph (b) is deleted. The following is then added as subparagraph (c) and sub-paragraph (c) of the Sub-Clause is renumbered as (d): "(c) if the Contractor was, or is, failing to perform any ES obligations or work under the Contract, the value of this work or obligation, as determined by the Engineer, may be

withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Engineer, may be withheld until rectification or replacement has been completed. Failure to perform includes, but is not limited to the following:

- (i) failure to comply with any ES obligations or work described in the Works' Requirements which may include: working outside site boundaries, excessive dust, damage to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g. from oils, human waste, damage to archaeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion:
- (ii) failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ES issues, or anticipated risks or impacts;
- (iii) failure to implement the C-ESMP e.g. failure to provide required training or sensitization;
- (iv) failing to have appropriate consents/permits prior to undertaking Works or related activities;
- (v) failure to submit ES report/s (as described in Particular Conditions Part D), or failure to submit such reports in a timely manner;
- (vi) failure to implement remediation as instructed by the Engineer within the specified timeframe (e.g. remediation addressing non-compliance/s)."

Sub-Clause 14.7 Payment

At the end of sub-paragraph (b): "and" is replaced with "or" and the following inserted as (iii):

"(iii) 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"

At the end of sub-paragraph (c): "." is replaced with ";" and the following inserted:

"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]."

Sub-Clause 14.9 Release of Retention Money	The following is added at the end of Sub-Clause 14.9: "Unless otherwise stated in the Contract, 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 and, if applicable, an ES 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 after the latest of the expiry dates of the Defects Notification Periods. The Employer shall return the guarantee to the Contractor within 21 days after receiving a copy of the Performance Certificate. If the Performance Security and, if applicable, an ES Performance Security required under Sub-Clause 4.2 is in the form of a demand guarantee, and the amount guaranteed under them 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 and, if applicable, an ES Performance Security and, if applicable, an ES Performance Security and, if applicable, an ES Performance Security and, if applicable, an ES Performance Security and, if applicable, an ES Performance Security and, if applicable, an ES Performance Security and, if applicable, an ES
Sub-Clause 14.12 Discharge	On the seventh line of the first paragraph, "Sub-Clause 21.6 [Arbitration]" is replaced with: "Clause 21 [Disputes and Arbitration]".
Sub-Clause 14.15 Currencies of Payment	Throughout Sub-Clause 14.15, "Contract Data" is replaced with: "Schedule of Payment Currencies".
Sub-Clause 15.1 Notice to Correct	"and" is deleted from (b) and
Tioner to Confect	"." is replaced by: "; and" in (c).
	The following is then added as (d)

	"(d) specify the time within which the Contractor shall respond to the Notice to Correct." In the third para., "shall immediately respond" is replaced with: "shall respond within the time specified in (d)". Further, in the third para., "to comply with the time specified in the Notice to Correct." is replaced with: "to comply with the time specified in (c)."
Sub-Clause 15.2.1 Notice	Sub-paragraph (h) is replaced with: "based on reasonable evidence, has engaged in Fraud and Corruption as defined in paragraph 2.2 of the Particular Conditions - Part C- Fraud and Corruption, in competing for or in executing the Contract."
Sub-Clause 15.8 Fraud and Corruption	The following new Sub-Clause is added: " 15.8.1 The Bank requires compliance with it's Integrity Framework comprising the African Development Bank Group's Sanctions Procedures, the Bank's Whistleblowing and Complaints Policy, the Bank's Procurement Policy under the Procurement Framework and any other applicable Policies and Procedures including their updates, as set forth in Particular Conditions - Part C- Fraud and Corruption. 15.8.2 The Employer requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee."
Sub-Clause 15.9 Eligibility	The following new Sub-Clause is added: "The Contractor and its Subcontractor or Suppliers shall have the nationality of an eligible country of the Bank in accordance with the Bank's Procurement Policy for the Bank Group Funded Operation described under the Bank's Procurement Framework, and as listed in Section V, Eligible Countries. The Contractor shall be deemed to have the nationality of a country if the Contractor is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or subconsultants for any part of the Contract including related Services. All materials, equipment and services to be supplied under the Contract shall have their country of origin in an eligible country of the Bank in accordance with the

	,
	Bank's Procurement Policy for Bank Group Funded Operations described under the Bank's Procurement Framework, and as set forth in Particular Conditions -Part E- Section V, Eligible Countries."
	The following paragraph is inserted after the first paragraph:
Sub-Clause 16.1 Suspension by Contractor	"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."
Sub-Clause 16.2.1	Sub-paragraph (j) is deleted in its entirety.
Notice	At the end of sub-paragraph (i): "; or" is replaced with: "."
	sub-paragraph (f) is replaced with:
	"(f) the Contractor does not receive a Notice of the Commencement Date under Sub-Clause 8.1 [Commencement of Works] within 180 days after receiving the Letter of Acceptance, for reasons not attributable to the Contractor."
Sub-Clause 16.2.2 Termination	The following is added at the end of Sub-Clause 16.2.2: "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."
Sub-Clause 16.3 Contractor's Obligations After Termination	[If the Employer has made available any Employer- Supplied Materials and/or Employer's Equipment in accordance with Sub-Clause 2.6, include the following:]
	"and" is deleted from the end of sub-paragraph (b), sub-paragraph (c) deleted and the following added:
	(c) deliver to the Engineer all Employer- Supplied Materials and/or Employer's Equipment made

Sub-Clause 17.1 Responsibility for Care of the Works	available to the Contractor in accordance with Sub-Clause 2.6 [Employer-Supplied materials and Employer's Equipment]; and (d) remove all other Goods from the Site, except as necessary for safety, and leave the Site." On the fourth and fifth lines of the first paragraph, replace "Date of Completion of the Works" with "issue of the Taking- Over Certificate for the Works". [If Employer- Supplied Materials are listed in the Specification for the Contractor's use in the execution of Works, include the following provision. See also Sub-Clause 2.6 [Employer-Supplied Materials and Employer's Equipment]] After the two instances of "Goods" in the last paragraph, the following is added: "Employer-Supplied Materials". [If Employer's Equipment are listed in the Employer's Requirements for the Contractor's use in the execution of Works, include the following provision. See also Sub-Clause 2.6 [Employer-Supplied Materials and Employer's Equipment]] After the two instances of "Goods" in the last paragraph, the following is added: "Employer's Equipment]]
Sub-Clause 17.3 Intellectual and Industrial Property Rights	On the first line of the second paragraph, replace "notice" is replaced with "a Notice".
Sub-Clause 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 its own cost, rectify the loss or damage to the satisfaction of the Engineer."
Sub-Clause 18.1 Exceptional Events	Sub-paragraph (c) is substituted with:

	"(c) riot, commotion, disorder or sabotage by persons other than the Contractor's Personnel and other employees of the Contractor and Subcontractors;"
Sub-Clause 18.4 Consequences of an Exceptional Event	The following is added at the end of sub-paragraph (b) after deleting the ".":
Exceptional Event	", including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Exceptional Events, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 19.2 [Insurance to be provided by the Contractor]."
Sub-Clause 18.5 Optional Termination	In sub-paragraph (c), "and necessarily" is inserted after "was reasonably".
Sub-Clause 19.1	The following paragraphs are added after the first:
General Requirements	"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 terms (if any) 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."
Sub-Clause 19.2 insurance to be provided by the Contractor	The following is inserted as the first sentence in Sub-Clause 19.2: "The Contractor shall be entitled to place all insurances relating to the Contract (including, but not limited to the insurance referred to Clause 19) with insurers from any eligible source country."
Sub-Clause 19.2.1 The Works	On the last line of the second paragraph, "Clause 12 [Tests after completion]" is deleted.
Sub-Clause 19.2.5 Injury to employees	The second paragraph is replaced with: "The Employer and the Engineer shall also be indemnified under the policy of 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, 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."
Sub-Clause 20.1 Claims	In a): "any additional payment" is replaced with "payment".
Sub-Clause 20.2	The first paragraph is replaced with:

Claims for Payment and/or EOT	"If either Party considers that it is entitled to claim under 20.1 (a) or (b), the following claim procedure shall apply:"
Sub-Clause 21.1 Constitution of the DAAB	In the second paragraph, at the end of the first sentence after deleting: ".", the following is added: ", each of whom shall meet the criteria set forth in Sub-Clause 3.3 of Appendix- General Conditions of Dispute Avoidance/ Adjudication Agreement."
	After the second paragraph insert the following paragraph: "If the Contract is with a foreign Contractor, the DAAB members shall not have the same nationality as the Employer or the Contractor."
Sub-Clause 21.2 Failure to Appoint DAAB Member (s)	For both (a) and (b): "by the date stated in the first paragraph of Sub-Clause 21.1 [Constitution of the DAAB]" is replaced with: "within 42 days from the date the Contract is signed by both Parties"
Sub-Clause 21.6 Arbitration	In the first paragraph, delete starting from: "international arbitration" up to the end of (c), and replace with the following: " arbitration. Arbitration shall be conducted as follows:
	 (a) if the contract is with foreign contractors, unless otherwise specified in the Contract Data; the dispute shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce; by one or three arbitrators appointed in accordance with these Rules. The place of arbitration shall be the neutral location specified in the Contract Data; and the arbitration shall be conducted in the ruling language defined in Sub-Clause 1.4 [Law and Language]. (b) If the Contract is with domestic contractors, arbitration with proceedings conducted in accordance with the laws of the Employer's country."
Appendix- General Con Agreement	nditions of Dispute Avoidance / Adjudication
Title	"General Conditions of Dispute Avoidance/Adjudication Agreement" is replaced with "General Conditions of DAAB Agreement".
1. Definitions	

Sub-Clause 1.2: In both the first and third lines, "DAA Agreement" is replaced with "DAAB Agreement". Sub-Clause 1.3: - In the first line, "Dispute Avoidance/Adjudication Agreement" or "DAA Agreement" means" is replaced with: - "DAAB Agreement" is as defined under the Contract and is". - In the first line of sub-paragraph (c), "DAA Agreement" is replaced with "DAAB Agreement". - In sub-paragraph (c)(ii), "chairman" is replaced with "chairperson". Sub-Clause 1.3 "DAAB Activities" is replaced with Sub-Clause 1.4 "DAAB Activities" and the subsequent Sub- Clauses under Clause 1 "Definitions" renumbered: Sub-Clause 1.7 to 12: Replace all instances of "DAA Agreement" with "DAAB Agreement". In Sub-Clause 1.8 a(i):" authorised representative of the contractor or of the Employer" is replaced with: "Contractor's Representative or authorised representative of the Employer". Sub-Clause 2.2 is deleted in its entirety. **General provisions** 2. Sub-Clause 3.3 is deleted and replaced with the following: Warranties "When appointing the DAAB Member, each Party relies on the DAAB Member's representations, that he/she; a) has at least a bachelor's degree in relevant disciplines such as law, engineering, construction management or contract management: b) has at least ten years of experience in contract administration/management and dispute resolution, out of which at least five years of experience as an arbitrator or adjudicator in construction-related disputes; c) has received formal training as an adjudicator from an internationally recognized organization; d) has experience and/or is knowledgeable in the type of work which the Contractor is to carry out under the Contract; e) has experience in the interpretation of construction and/or engineering contract documents; f) has familiarity with the forms of contract published by FIDIC since 1999, and an understanding of the dispute resolution procedures contained therein; and

	g) is fluent in the language for communications stated in the Contract Data (or the language as agreed between the Parties and the DAAB)."				
7. Confidentiality	In Sub-Clause 7.3: "or" is deleted after sub-paragraph (b), and the following added:				
	"or (d) is being provided to the Bank."				
9. Fees and Expenses	In Sub-Clause 9.1 (c): "business class or equivalent" is replaced with: "in less than first class".				
	In Sub-Clause 9.4: "and air fares" and "other" are deleted from the first and second sentences respectively.				
10. Resignation & Termination	In Sub-Clause 10.3: "the DAA Agreement" is replaced with: "a DAAB member's DAAB Agreement".				
Annex- DAAB Procedural Ru					
	"chairman" is replaced with "chairperson".				
Rule 8.3 On the sixth line, "	chairman" is replaced with "chairperson".				
Form of Dispute Avoidance/A	Adjudication Agreement				
_	ent" are replaced with: "DAAB Agreement".				
In C (b): "chairman" is replaced	d with "chairperson".				

Particular Conditions

Part C- Fraud and Corruption

(Text in this Particular Conditions - Part C shall not be modified)

1. **Purpose**

1.1 The Bank's Integrity Framework and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption¹.

2.2 To this end, the Bank:

- a. Defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party²;
 - ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party³ to obtain financial or other benefit or to avoid an obligation;
 - iii. "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;
 - iv. "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;
 - v. "obstructive practice" is:
 - (a) 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, harass or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-

¹ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

² For the purpose of this sub-paragraph, "another party" refers to a public official acting in relation to the procurement process or contract execution, including Bank staff and employees of other organizations taking or reviewing procurement decisions.

³ For the purpose of this sub-paragraph, "party" refers to a public official, including Bank staff and employees of other organizations taking or reviewing procurement decisions.; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution."

- contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Bank's Integrity Framework, and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner⁴; (ii) to be a nominated ⁵ sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect ⁶ all accounts, records and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.

⁴ For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

⁵ A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its prequalification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

Particular Conditions

Part D- Environmental and Social (ES)

Metrics for Progress Reports

[Note to Employer: the following metrics may be amended to reflect the specifics of the Contract. **The** Employer shall ensure that the metrics provided are appropriate for the Works and impacts/key issues identified in the environmental and social assessment.]

Metrics for regular reporting:

- a. environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;
- b. health and safety incidents, accidents, injuries that require treatment and all fatalities;
- c. interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);
- d. status of all permits and agreements:
 - i. work permits: number required, number received, actions taken for those not received;
 - ii. status of permits and consents:
 - list areas/facilities with permits required (quarries, asphalt & batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);
 - list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);
 - identify major activities undertaken in each area in the reporting period and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);
 - for quarries: status of relocation and compensation (completed, or details of activities and current status in the reporting period).
- e. health and safety supervision:
 - i. safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;
 - ii. number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);
- f. worker accommodations:
 - i. number of expats housed in accommodations, number of locals;
 - ii. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;

Section IX: Particular	Conditions	Page	175

- iii. actions taken to recommend/require improved conditions, or to improve conditions.
- g. Health services: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);
- h. gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);

i. training:

- i. number of new workers, number receiving induction training, dates of induction training;
- ii. number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;
- iii. number and dates of communicable diseases (including STDs) sensitization and/or training, no. workers receiving training (in the reporting period and in the past); same questions for gender sensitization, flag person training.
- iv. number and date of SEA prevention sensitization and/or training events, including number of workers receiving training on Code of Conduct for Contractor's Personnel (in the reporting period and in the past), etc.
- j. environmental and social supervision:
 - i. environmentalist: days worked, areas inspected and numbers of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;
 - ii. sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and
 - iii. community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.
- k. Grievances: list new grievances (e.g. number of allegations of SEA) received in the reporting period and number of unresolved past grievances by date received, complainant's age and sex, how received, to whom referred to for action, resolution and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):
 - i. Worker grievances;
 - ii. Community grievances
- 1. Traffic, road safety and vehicles/equipment:
 - i. traffic and road safety incidents and accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;

	Section	IX:	Particula	r Conditions		Page	1	7	6
--	---------	-----	-----------	--------------	--	------	---	---	---

- ii. traffic and road safety incidents and accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;
- iii. overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).
- m. Environmental mitigations and issues (what has been done):
 - i. dust: number of working bowsers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/ spoil lorries with covers, actions taken for uncovered vehicles;
 - ii. erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;
 - iii. quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken in the reporting period at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;
 - iv. blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);
 - v. spill clean-ups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination;
 - vi. waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;
 - vii. details of tree plantings and other mitigations required undertaken in the reporting period;
 - viii. details of water and swamp protection mitigations required undertaken in the reporting period.

n. compliance:

- i. compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;
- ii. compliance status of C-ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- iii. compliance status of SEA prevention and response action plan: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- iv. compliance status of Health and Safety Management Plan re: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance

S	Section	IX:	Particul	ar (Conditions	Page	1	7	7

v.	continued violation	ns, continued failure	of equipment, con	ntinued lack of vehi	onmental and social: cle covers, spills not er sections as needed.

Particular Conditions

Part E-Section V - Eligible Countries

Eligibility for the Provision of Goods, Works and Non-Consulting Services in Bank Group Financed Procurement

- A. Provisions under Section 5 "Eligibility" of the Procurement Policy for Bank Group Funded Operations and Chapter A2 of the Operations Procurement Manual under Procurement Framework of the African Development Bank
- 1. The African Development Fund (ADF) permits firms and individuals from all countries to offer goods, works and services for ADF funded projects.

However, the proceeds of any Financing undertaken in the operations of the African Development Bank (ADB) and the Nigeria Trust Fund (NTF) shall be used for procurement of goods and works, including the related services, provided by bidders from Eligible⁷ Countries.⁸ Any conditions for participation shall be limited to those that are essential to ensure the firm's capability to fulfill the contract in question. In the case of ADB and NTF, bidders from non-Member Countries offering goods, works and related services (including transportation and insurance) are not eligible even if they offer these from Eligible Member Countries. Any waiver to this rule will be in accordance with the Articles 17(1) (d) of the Agreement Establishing the African Development Bank and 4.1 of the Agreement Establishing the Nigeria Trust Fund.

B. Rules and Procedures for Procurement of Goods and Works

Overview

- 1. The eligibility criteria for participation in the supply of goods, works and related services, to be procured through the ADB and NTF Financing, derive from the requirements of the Agreement Establishing the African Development Bank, Article 17.1.d, and the Agreement Establishing the Nigeria Trust Fund, Article 4.1. The foregoing requirements basically prescribe two types of eligibility criteria:
 - (i) The eligibility of the bidder; and
 - (ii) The eligibility of the goods, works and related services.

Eligibility of the Bidder under the ADB & NTF

- 2. The eligibility of the bidder shall be based on nationality, in accordance with the following rules:
 - (a) <u>Natural Persons</u>: A natural person is eligible if he or she is a national of a Member Country of the ADB. Where a person has more than one nationality, such a person shall be eligible if the nationality indicated in his or her bid is that of a Member Country of the ADB.
 - (b) Corporations: A corporation is eligible if it satisfies the following criteria:
 - 1. it is incorporated in a country that is a Member of the Bank, or State Participant of the Fund;

Section IX: Particular Conditions Page 1	/:	J
--	----	---

⁷ Refer to Bank Procurement Framework for additional information on Eligibility.

⁸ "Eligible Countries" shall mean: (a) in the case of the African Development Bank (ADB) and the Nigeria Trust Fund (NTF), the Member Countries of the ADB; and (b) in the case of the African Development Fund, any country.

- 2. it is a national of a country that is a Member of the ADB, as determined by the law of its place of incorporation; and
- 3. it has its principal place of business in a country that is a Member of the ADB.
- (c) <u>Joint Ventures and Associations</u>: An unincorporated joint venture, partnership, or association, shall be eligible if more than 50% of the value of its works and/or services is executed by its members satisfying the eligibility requirements for individuals or corporations.

Eligibility of the Goods, Works and Related Services

- 3. In order to be eligible, the goods to be procured must have been mined, grown, or produced, in the form in which they are purchased, in an Eligible Member Country.
- 4. For works contracts, which may include civil works, plant construction, or turnkey contracts, the contractor must satisfy the nationality criteria of eligibility, either as a natural person, or corporation, or joint venture and association. Labour, equipment, and materials needed for carrying out the works contract, shall be supplied from Eligible Member Countries.
- 5. For contracts, which have been awarded on the basis of Cost, Insurance and Freight (CIF), or Carriage and Insurance Paid (CIP), bidders shall be free to arrange for ocean and other transportation, and the related insurance, from any Eligible Member Country. On the other hand, where goods are shipped on FOB basis, and the Bank has agreed to finance transportation and insurance separately, which are arranged by the purchaser, under a separate contract, the Bank shall be satisfied that the services are supplied from Eligible Member Countries.

List of Eligible Countries

6. List of Eligible countries can be found in African Development Bank's website:

https://www.afdb.org/en/about-us/corporate-information/members/

Ineligible Countries in reference to ITB 4.8 and ITB 5.1

7. In reference to ITB 4.8 and ITB 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.8(a) and ITB 5.1: [insert a list of the countries following approval by the Bank to apply the restriction or state "none"].

Under ITB 4.8(b) and ITB 5.1: [insert a list of the countries following approval by the Bank to apply the restriction or state "none"

Section IX - General Conditions of Contract (GC)

[Name of Employer]

[Name of Contract]

Red Book

© FIDIC 2017. All rights reserved.

The Conditions of Contract are the "General Conditions" which form part of the "Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer ("Red book") Second edition 2017" published by the Federation Internationale Des Ingenieurs – Conseils (FIDIC) and the following "Particular Conditions" which comprise of the AfDB's COPA and the amendments and additions to such General Conditions.

An original copy of the above FIDIC publication i.e. "Conditions of Contract for Building and Engineering Works Designed by the Employer" must be obtained from FIDIC.

International Federation of Consulting Engineers (FIDIC)

FIDIC Bookshop – Box- 311 – CH – 1215 Geneva 15 Switzerland

Fax: +41 22 799 49 054

Telephone: +41 22 799 49 01

E-mail: fidic@fidic.org

FIDIC code: ISBN13: 978-2-88432-084-9

Section X. General Conditions (GC)

Table of Clauses

General Provisions		
Definitions		
The Contract		
Interpretation		
Communications		
Law and Language		
Priority of Documents	106	
Contract Agreement	106	
Assignment	107	
Care and Supply of Documents	107	
Delayed Drawings or Instructions	107	
Employer's Use of Contractor's Documents		
Contractor's Use of Employer's Documents	109	
Confidential Details	109	
Compliance with Laws	109	
Joint and Several Liability	110	
Inspections and Audit by the Bank	110	
The Employer	110	
Right of Access to the Site	110	
Permits, Licences or Approvals	111	
Employer's Personnel		
Employer's Financial Arrangements	111	
Employer's Claims	112	
The Engineer	113	
Engineer's Duties and Authority	113	
Delegation by the Engineer		
Instructions of the Engineer		
Replacement of the Engineer	115	

Determinations	116
The Contractor	
Contractor's General Obligations	
Performance Security	
Contractor's Representative	118
Subcontractors	119
Assignment of Benefit of Subcontract	119
Co-operation	119
Setting Out	120
Safety Procedures	121
Quality Assurance	121
Site Data	
Sufficiency of the Accepted Contract Amount	122
Unforeseeable Physical Conditions	122
Rights of Way and Facilities	123
Avoidance of Interference	
Access Route	124
Transport of Goods	124
Contractor's Equipment	125
Protection of the Environment	125
Electricity, Water and Gas	
Employer's Equipment and Free-Issue Materials	126
Progress Reports	126
Security of the Site	127
Contractor's Operations on Site	127
Nominated Subcontractors	
Definition of "nominated Subcontractor"	128
Objection to Nomination	
Payments to nominated Subcontractors	129
Evidence of Payments	130
Staff and Labour	130
Engagement of Staff and Labour	130
Rates of Wages and Conditions of Labour	130
Persons in the Service of Employer	
Labour Laws	131

Working Hours	131
Facilities for Staff and Labour	131
Health and Safety	
Contractor's Superintendence	
Contractor's Personnel	
Records of Contractor's Personnel and Equipment	134
Disorderly Conduct	
Foreign Personnel	134
Supply of Foodstuffs	
Supply of Water	
Measures against Insect and Pest Nuisance	
Alcoholic Liquor or Drugs	
Arms and Ammunition	
Festivals and Religious Customs	
Funeral Arrangements	
Forced labour	
Child labour	
Employment Records of Workers	
Workers' Organisations	
Non-Discrimination and Equal Opportunity	
Plant, Materials and Workmanship	
Manner of Execution_	137
Samples	138
Inspection	138
Testing	138
Rejection	
Remedial Work	
Ownership of Plant and Materials	
Royalties	
Commencement, Delays and Suspension	
Commencement of Works	
Time for Completion	
Programme	
Extension of Time for Completion	
Delays Caused by Authorities	143

Rate of Progress	144
Delay Damages	144
Suspension of Work	145
Consequences of Suspension	
Payment for Plant and Materials in Event of Suspension	146
Prolonged Suspension	146
Tests on Completion	146
Contractor's Obligations	146
Delayed Tests	147
Retesting	
Failure to Pass Tests on Completion	147
Employer's Taking Over	
Taking Over of the Works and Sections	
Taking Over of Parts of the Works	149
Interference with Tests on Completion	150
Surfaces Requiring Reinstatement	151
Defects Liability	151
Completion of Outstanding Work and Remedying Defects	151
Cost of Remedying Defects	151
Extension of Defects Notification Period	152
Failure to Remedy Defects	
Removal of Defective Work	153
Further Tests	153
Right of Access	153
Contractor to Search	154
Performance Certificate	
Unfulfilled Obligations	154
Clearance of Site	154
Measurement and Evaluation	155
Works to be Measured	155
Method of Measurement	155
Evaluation	156
Omissions	
Variations and Adjustments	
Right to Vary	157

Value Engineering	158
Variation Procedure	159
Payment in Applicable Currencies	159
Provisional Sums	
Day work	
Adjustments for Changes in Legislation	161
Adjustments for Changes in Cost	
Contract Price and Payment	163
The Contract Price	
Advance Payment	
Application for Interim Payment Certificates	
Schedule of Payments	
Plant and Materials intended for the Works	
Issue of Interim Payment Certificates	169
Payment	169
Delayed Payment	
Payment of Retention Money	171
Statement at Completion	
Application for Final Payment Certificate	172
Discharge	
Issue of Final Payment Certificate	
Cessation of Employer's Liability	174
Currencies of Payment	174
Termination by Employer	175
Notice to Correct	175
Termination by Employer	175
Valuation at Date of Termination	177
Payment after Termination	177
Employer's Entitlement to Termination for Convenience	
Fraud and Corruption	178
Suspension and Termination by Contractor	181
Contractor's Entitlement to Suspend Work	181
Termination by Contractor	
Cessation of Work and Removal of Contractor's Equipment	
Payment on Termination	183

Risk and Responsibility	183
Indemnities	183
Contractor's Care of the Works	184
Employer's Risks	
Consequences of Employer's Risks	18:
Intellectual and Industrial Property Rights	
Limitation of Liability	18′
Use of Employer's Accommodation/Facilities	18′
Insurance	18′
General Requirements for Insurances	188
Insurance for Works and Contractor's Equipment	189
Insurance against Injury to Persons and Damage to Property	192
Insurance for Contractor's Personnel	192
Force Majeure	192
Definition of Force Majeure	193
Notice of Force Majeure	19:
Duty to Minimise Delay	19:
Consequences of Force Majeure	19-
Force Majeure Affecting Subcontractor	19
Optional Termination, Payment and Release	19-
Release from Performance	19
Claims, Disputes and Arbitration	19
Contractor's Claims	19
Appointment of the Dispute Board	19
Failure to Agree on the Composition of the Dispute Board	19
Obtaining Dispute Board's Decision	198
Amicable Settlement	
Arbitration	
Failure to Comply with Dispute Board's Decision	
Expiry of Dispute Board's Appointment	20:

	General Conditions (GC) General Provisions Definitions		
1.			
1.1			
these (General Con ing persons	of Contract ("these Conditions"), which include Particular Conditions, Parts A and B, and inditions, the following words and expressions shall have the meanings stated. Words or parties include corporations and other legal entities, except where the context requires	
1.1.1	The C	Contract	
	1.1.1.1	"Contract" means the Contract Agreement, the Letter of Acceptance, the Letter of Bid, 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 GC 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 Bid, 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 Bid" means the document entitled 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 Bid, 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	"Bid" means the Letter of Bid and all other documents which the Contractor submitted with the Letter of Bid, as included in the Contract.
	1.1.1.9	"Bill of Quantities", "Day work 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.
1.1.2	Partie	s and Persons
	1.1.2.1	"Party" means the Employer or the Contractor, as the context requires.
	1.1.2.2	"Employer" means the person named as employer in the Particular Conditions and the legal successors in title to this person.
	1.1.2.3	"Contractor" means the person(s) named as contractor in the Letter of Bid accepted by the Employer and the legal successors in title to this person(s).
	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 Particular Conditions, or other person appointed from time to time by the Employer and notified to the Contractor under GC Clause 3.4 [Replacement of the Engineer].
	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 GC Clause 4.3 [Contractor's Representative], who acts on behalf of the Contractor.
	1.1.2.6	"Employer's Personnel" means the Engineer, the assistants referred to in GC Clause 3.2 [Delegation by the Engineer] 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.
	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.
	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.
	1.1.2.9	"DB" means the person or three persons appointed under GC Clause 20.2 [Appointment of the Dispute Board] or GC Clause 20.3 [Failure to Agree on the Composition of the Dispute Board]

	1.1.2.10	"FIDIC" means the Fédération Internationale des Ingénieurs-Conseils, the international
	11112110	federation of consulting engineers.
	1.1.2.11	"Bank" means the financing institution (if any) named in the Particular Conditions.
	1.1.2.12	"Borrower" means the person (if any) named as the borrower in the Particular Conditions.
1.1.3	Dates,	Tests, Periods and Completion
	1.1.3.1	"Base Date" means the date 28 days prior to the latest date for submission of the Bid.
	1.1.3.2	"Commencement Date" means the date notified under GC Clause 8.1 [Commencement of Works].
	1.1.3.3	"Time for Completion" means the time for completing the Works or a Section (as the case may be) under GC Clause 8.2 [Time for Completion], as stated in the Particular Conditions (with any extension under GC Clause 8.4 [Extension of Time for Completion]), calculated from the Commencement Date.
	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 GC 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 GC Clause 10 [Employer's Taking Over].
	1.1.3.6	"Tests 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 GC Clause 11.1 [Completion of Outstanding Work and Remedying Defects], which extends over twelve months except if otherwise stated in the Particular Conditions (with any extension under GC Clause 11.3 [Extension of Defects Notification Period]), calculated from the date on which the Works or Section is completed as certified under GC Clause 10.1 [Taking Over of the Works and Sections].
	1.1.3.8	"Performance Certificate" means the certificate issued under GC Clause 11.9 [Performance Certificate].
	1.1.3.9	"day" means a calendar day and "year" means 365 days.
1.1.4	Money	y 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 GC 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 GC Clause 14.13 [Issue of Final Payment Certificate].
	1.1.4.5	"Final Statement" means the statement defined in GC 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 GC Clause 14 [Contract Price and Payment], other than the Final Payment Certificate.
	1.1.4.8	"Local Currency" means the currency of the Country.
	1.1.4.9	"Payment Certificate" means a payment certificate issued under GC 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 GC Clause 13.5 [Provisional Sums].
	1.1.4.11	"Retention Money" means the accumulated retention moneys which the Employer retains under GC Clause 14.3 [Application for Interim Payment Certificates] and pays under GC 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 GC Clause 14 [Contract Price and Payment], for a payment certificate.
1.1.5	Work	s 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 Work of them as appropriate. 1.1.5.3 "Materials" means things of all kinds (other than Plant) intended to form or form of the Permanent Works, including the supply-only materials (if any) to be supplicated Contractor under the Contract. 1.1.5.4 "Permanent Works" means the permanent works to be executed by the Contract the Contract. 1.1.5.5 "Plant" means the apparatus, machinery and other equipment intended to form on part of the Permanent Works, including vehicles purchased for the Employer and to the construction or operation of the Works. 1.1.5.6 "Section" means a part of the Works specified in the Particular Conditions as a Sany). 	ming part ied by the etor under
of the Permanent Works, including the supply-only materials (if any) to be supplication Contractor under the Contract. 1.1.5.4 "Permanent Works" means the permanent works to be executed by the Contract the Contract. 1.1.5.5 "Plant" means the apparatus, machinery and other equipment intended to form or part of the Permanent Works, including vehicles purchased for the Employer and to the construction or operation of the Works. 1.1.5.6 "Section" means a part of the Works specified in the Particular Conditions as a Section of the Works are constructed in the Particular Conditions as a Section of the Works.	etor under
the Contract. 1.1.5.5 "Plant" means the apparatus, machinery and other equipment intended to form or part of the Permanent Works, including vehicles purchased for the Employer and to the construction or operation of the Works. 1.1.5.6 "Section" means a part of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions and the Particular Conditions as a Section of the Works specified in the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Conditions and the Particular Condi	r forming
part of the Permanent Works, including vehicles purchased for the Employer and to the construction or operation of the Works. 1.1.5.6 "Section" means a part of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions as a Section of the Works specified in the Particular Conditions and the Works specified in the Particular Conditions and the Works specified in the Particular Conditions and the Works specified in the Particular Conditions and the Works specified in the Particular Conditions and the Works specified in the Particular Conditions and the Works specified in the Particular Conditions and the Works specified in the Particular Conditions and the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works specified in the Works s	_
	ection (if
1.1.5.7 "Temporary Works" means all temporary works of every kind (other than Con Equipment) required on Site for the execution and completion of the Permaner and the remedying of any defects.	
1.1.5.8 "Works" mean the Permanent Works and the Temporary Works, or either of appropriate.	them as
1.1.6 Other Definitions	
1.1.6.1 "Contractor's Documents" means the calculations, computer programs a software, drawings, manuals, models and other documents of a technical nature 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.	
1.1.6.3 "Employer's Equipment" means the apparatus, machinery and vehicles (if ar available by the Employer for the use of the Contractor in the execution of the V stated in the Specification; but does not include Plant which has not been taken ov Employer.	Works, as
1.1.6.4 "Force Majeure" is defined in GC Clause 19 [Force Majeure].	
1.1.6.5 "Laws" means all national (or state) legislation, statutes, ordinances and other regulations and by-laws of any legally constituted public authority.	laws, and
1.1.6.6 "Performance Security" means the security (or securities, if any) under GC C [Performance Security].	lause 4.2

	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 GC Clause 13 [Variations and Adjustments].				
	1.1.6.10 "Notice of Dissatisfaction" means the notice given by either Party to the other under GC Clause 20.4 [Obtaining Dispute Board's Decision] indicating its dissatisfaction and intention to commence arbitration.				
1.2	Interpretation				
	1.2.1 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;				
	(e) the word "tender" is synonymous with "bid" and "tenderer" with "bidder" and the words "tender documents" with "bidding documents".				
	1.2.2 The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.				
	1.2.3 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 Particular Conditions.				
1.3	Communications				
	1.3.1 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 Particular Conditions; and				

	(b) delivered, sent or transmitted to the address for the recipient's communications as stated in the Particular Conditions. 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.		
	1.3.2	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			
	1.4.1	The Contract shall be governed by the law of the country or other jurisdiction stated in the Particular Conditions.		
		The ruling language of the Contract shall be that stated in the Particular Conditions.		
		The language for communications shall be that stated in the Particular Conditions. If no language is stated there, the language for communications shall be the ruling language of the Contract.		
1.5	Priority of Documents			
	1.5.1	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 Tender,		
		(d) the Particular Conditions – Part A,		
		(e) the Particular Conditions – Part B		
		(f) the 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 an necessary clarification or instruction.			
1.6	Contr	ract Agreement			
	1.6.1	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 provided in Section IX, Contract Forms 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				
	1.7.1	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				
	1.8.1	The Specification and Drawings shall be in the custody and care of the Employer. Unles 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 othe 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 of defect			

1.9	Delayed Drawings or Instructions			
	1.9.1	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 GC Clause 20.1 [Contractor's Claims] to:		
		(a) an extension of time for any such delay, if completion is or will be delayed, under GC 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		
	1.9.2	After receiving this further notice, the Engineer shall proceed in accordance with GC 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			
	1.10.1	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.		
	1.10.2	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		
		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.		

	1 10 2	
	1.10.3	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 GC Clause.
1.11	Conti	ractor's Use of Employer's Documents
	1.11.1	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	Confi	dential Details
	1.12.1	. 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 the Contractor's 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	Comp	pliance with Laws
	1.13.1	The Contractor shall, in performing the Contract, comply with applicable Laws.
	1.13.2	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
1.14.1	1.14.1 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
	1.15.1 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
	2.1.1 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 Particular Conditions. 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.

		(b) take actions similar to those which the Contractor is required to take under GC Clauses 4.8.1(a), 4.8.1(b), and 4.8.1(c) [Safety Procedures] and under GC Clause 4.18 [Protection of the Environment].		
	2.3.1	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 GC Clause 4.6 [Co-operation], and		
2.3	Emp	oloyer's Personnel		
		iii). for the export of Contractor's Equipment when it is removed from the Site.		
		ii). for the delivery of Goods, including clearance through customs, and		
		i). which the Contractor is required to obtain under GC Clause 1.13 [Compliance with Laws],		
		(b) any permits, licences or approvals required by the Laws of the Country		
		(a) copies of the Laws of the Country which are relevant to the Contract but are not readily available, and		
	2.2.1	The Employer shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:		
2.2	Permits, Licences or Approvals			
	2.1.5	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.		
	2.1.4	After receiving this notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine these matters.		
		(b) payment of any such Cost plus profit, which shall be included in the Contract Price.:		
		(a) an extension of time for any such delay, if completion is or will be delayed, under GC Clause 8.4 [Extension of Time for Completion], and		
	2.1.3	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 GC Clause 20.1 [Contractor's Claims] to		
	2.1.2	If no such time is stated in the Particular Conditions, 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 GC Clause 8.3 [Programme].		

2.4	Emp	loyer's Financial Arrangements
	2.4.1	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 GC 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.
	2.4.2	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 such notice of the extent to which such funds will be available.
2.5	Emp	loyer's Claims
	2.5.1	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 GC Clause 4.19 [Electricity, Water and Gas], under GC Clause 4.20 [Employer's Equipment and Free-Issue Material], or for other services requested by the Contractor.
	2.5.2	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.
	2.5.3	The particulars shall specify the GC 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 GC 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 GC Clause 11.3 [Extension of Defects Notification Period].

	2.5.4	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 GC Clause.
3	The l	Engineer
3.1	Engi	neer's Duties and Authority
	3.1.1	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.
	3.1.2	The Engineer shall have no authority to amend the Contract.
	3.1.3	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.
	3.1.4	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.
	3.1.5	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 otherwise expressly specified shall be notified in writing to the Contractor within 28 days of receipt
	3.1.6	The following provisions shall apply:

The Engineer shall obtain the specific approval of the Employer before taking action under the-following Clauses of these Conditions: (a) GC Clause 4.12: Agreeing or determining an extension of time and/or additional cost. **GC** 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 Particular Conditions. GC Clause 13.3: Approving a proposal for Variation submitted by the Contractor in accordance with GC Clause 13.1 or 13.2 GC Clause 13.4: Specifying the amount payable in each of the applicable currencies 3.1.7 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 GC Clause 13 and shall notify the Contractor accordingly, with a copy to the Employer. 3.2 Delegation by the Engineer 3.2.1 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 GC Clause 3.5 [Determinations]. 3.2.2 Assistants shall be suitably qualified persons, who are competent to carry out these duties and exercise this authority, and who are fluent in the language for communications defined in GC Clause 1.4 [Law and Language].

3.2.3 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: any failure to disapprove any work, Plant or Materials shall not constitute approval, (a) 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 3.3.1 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 GC Clause. If an instruction constitutes a Variation, GC Clause 13 [Variations and Adjustments] shall apply. 3.3.2 3.3.2 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: gives an oral instruction, (a) 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 3.4.1 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	Dete	rminations
	3.5.1	Whenever these Conditions provide that the Engineer shall proceed in accordance with this GC 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.
	3.5.2	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 GC Clause 20 [Claims, Disputes and Arbitration].
4	The (Contractor
4.1	Cont	ractor's General Obligations
	4.1.1	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.
	4.1.2	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.
	4.1.3	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, in the Rules and Procedures for Procurement of Goods and Works.
	4.1.4	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 Contractors' 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.
	4.1.5	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: the Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the procedures specified in the Contract; these Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in GC 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 prior to the commencement of the Tests on Completion, the Contractor shall submit (d) 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 GC 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** 4.2.1 The Contractor shall obtain (at his cost) a Performance Security for proper performance, in the amount stated in the Particular Conditions 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 Particular Conditions, this GC Clause shall not apply. 4.2.2 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 stipulated in Section IX, Contract Forms or in another form approved by the Employer. 4.2.3 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.

	4.2.5	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.
	4.2.6	The Employer shall return the Performance Security to the Contractor within 21 days after receiving a copy of the Performance Certificate.
	4.2.7	Without limitation to the provisions of the rest of this GC 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	Cont	ractor's Representative
	4.3.1	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.
	4.3.2	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 GC 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.
	4.3.3	The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint a replacement.
	4.3.4	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.
	4.3.5	The Contractor's Representative shall, on behalf of the Contractor, receive instructions under GC Clause 3.3 [Instructions of the Engineer].
	4.3.6	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.

4.3.7	The Contractor's Representative shall be fluent in the language for communications defined in GC 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.
Subc	ontractors
4.4.1	The Contractor shall not subcontract the whole of the Works.
4.4.2	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 GC Clause 4.5 [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under GC Clause 15.2 [Termination by Employer].
4.4.3	The Contractor shall ensure that the requirements imposed on the Contractor by GC Clause 1.12 [Confidential Details] apply equally to each Subcontractor.
4.4.4	Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from the Country to be appointed as Subcontractors.
Assig	gnment of Benefit of Subcontract
4.5.1	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.
	4.4.1 4.4.2 4.4.3 4.4.4 Assig

4.6	Co-o	peration
	4.6.1	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.
	4.6.2	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.
	4.6.3	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	Settii	ng Out
	4.7.1	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.
	4.7.2	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.
	4.7.3	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 GC Clause 20.1 [Contractor's Claims] to:
		(a) an extension of time for any such delay, if completion is or will be delayed, under GC 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.

	4.7.4	After receiving this notice, the Engineer shall proceed in accordance with GC 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 GC Clause 4.7.3(a) and (b) above related to this extent.
4.8	Safet	y Procedures
	4.8.1	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,
		 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 GC 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	Quali	ity Assurance
	4.9.1	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.
	4.9.2	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.
	4.9.3	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 I)ata
	4.10.1	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.

4.10.2 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 4.11.1 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 GC Clause 4.10 [Site Data]. 4.11.2 4.11.2 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** 4.12.1 In this GC 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. 4.12.2 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.

4.12.3 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, GC Clause 13 [Variations and Adjustments] shall apply. 4.12.4 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 GC Clause 20.1 [Contractor's Claims] to: (a) an extension of time for any such delay, if completion is or will be delayed, under GC Clause 8.4 [Extension of Time for Completion], and (b) payment of any such Cost, which shall be included in the Contract Price. 4.12.5 Upon receiving such notice and inspecting and/or investigating these physical conditions, the Engineer shall proceed in accordance with GC 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 GC 4.12.4(a) and (b) above related to this extent. 4.12.6 However, before additional Cost is finally agreed or determined for item (ii) under GC Clause 4.12.5, 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 Bid. If and to the extent that these more favourable conditions were encountered, the Engineer may proceed in accordance with GC 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 GC 4.12.4(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. 4.12.7 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 4.13.1 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
	4.14.1 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.
	4.14.2 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
	4.15.1 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.
	4.15.2 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			
	4.16.1	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	Contr	actor's Equipment		
	4.17.1	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	Prote	ction of the Environment		
	4.18.1	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.		
	4.18.2	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	Electr	ricity, Water and Gas		
	4.19.1	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.		

	4.19.2	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.
	4.19.3	The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Engineer in accordance with GC Clause 2.5 [Employer's Claims] and GC Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Employer.
4.20	Empl	oyer's Equipment and Free-Issue Materials
	4.20.1	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
	4.20.2	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 GC Clause 2.5 [Employer's Claims] and GC Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Employer.
	4.20.3	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.
	4.20.4	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	Progr	ress l	Reports
	4.21.1	prep shall Com	ess otherwise stated in the Particular Conditions, monthly progress reports shall be pared by the Contractor and submitted to the Engineer in six copies. The first report I cover the period up to the end of the first calendar month following the numencement Date. Reports shall be submitted monthly thereafter, each within 7 days the last day of the period to which it relates.
	4.21.2		orting shall continue until the Contractor has completed all work which is known to be tanding at the completion date stated in the Taking-Over Certificate for the Works.
	4.21.3	Eacl	h 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 GC 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 GC 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 GC Clause 2.5 [Employer's Claims] and notices given under GC 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
4.22.1	4.22.1 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
	4.23.1 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.
	4.23.2 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.
	4.23.3 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
	4.24.1 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.

	4.24.2 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 GC Clause 20.1 [Contractor's Claims] to:
	(a) an extension of time for any such delay, if completion is or will be delayed, under GC Clause 8.4 [Extension of Time for Completion], and
	(b) payment of any such Cost, which shall be included in the Contract Price.
	4.24.1 After receiving this further notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine these matters.
5	Nominated Subcontractors
5.1	Definition of "nominated Subcontractor"
5.1.1	5.1.1 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 GC Clause 13 [Variations and Adjustments], instructs the Contractor to employ as a Subcontractor subject to GC Clause 5.2 [Objection to Notification].
5.2	Objection to Nomination

	5.1.2 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:
	 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 GC Clause 5.3 [Payment to nominated Subcontractors].
5.3	Payments to nominated Subcontractors
5.3.1	5.3.1 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 GC Clause 13.5.1(b) [Provisional Sums], except as stated in GC Clause 5.4 [Evidence of Payments].

5.4	Evide	ence of Payments	
	5.4.1	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 this GC Clause 5.4.1(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		
	6.1.1	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.	
	6.1.2	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	
	6.2.1	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.	

	6.2.2	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	Perso	ons in the Service of Employer
	6.3.1	The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Employer's Personnel.
6.4	Labo	our Laws
	6.4.1	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.
	6.4.2	The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.
6.5	Wor	king Hours
	6.5.1	No work shall be carried out on the Site on locally recognised days of rest, or outside the normal working hours stated in the Particular Conditions, 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	Facil	ities for Staff and Labour
	6.6.1	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.
	6.6.2	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
	6.7.1	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.
	6.7.2	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.
	6.7.3	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.
	6.7.4	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.
	6.7.5	The Contractor shall throughout the contract (including the Defects Notification Period): (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labour (including all the Contractor's employees, all Sub-Contractors and Consultants' 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.

	6.7.6	The Contractor shall include in the program to be submitted for the execution of the Works under GC Clause 8.3 an alleviation program 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 GC Clause and the related specification. For each component, the programme shall detail the resources to be provided or utilised and any related subcontracting 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	Contra	actor's Superintendence
	6.8.1	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.
	6.8.2	Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in GC 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	Contra	actor's Personnel
	6.9.1	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.
	6.9.2	If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

6.10	Record	ls of Contractor's Personnel and Equipment		
	6.10.1	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	Disord	erly Conduct		
	6.11.1	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.		
6.12	Foreign Personnel			
	6.12.1	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.		
	6.12.2	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.		
6.13	Supply	of Foodstuffs		
	6.13.1	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.		
6.14	Supply of Water			
	6.14.1	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.		

6.15	Measu	res against Insect and Pest Nuisance		
	6.15.1	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 their danger to health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.		
6.16	Alcoholi	c Liquor or Drugs		
	6.16.1	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.		
6.17	Arms a	and Ammunition		
	6.17.1	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.		
6.18	Festivals and Religious Customs			
	6.18.1	The Contractor shall respect the Country's recognised festivals, days of rest and religious or other customs.		
6.19	Funera	al Arrangements		
	6.19.1	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.		
6.20	Forced	labour		
	6.20.1	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.		

6.21	Child labour			
	6.21.1	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 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.		
6.22	Emplo	yment Records of Workers		
	6.22.1	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 summarised on a monthly basis and submitted to the Engineer, and these records shall be available for inspection by Auditors during normal working hours. These records shall be included in the details to be submitted by the Contractor under GC Clause 6.10 [Records of Contractor's Personnel and Equipment].		
6.23	Workers' Organisations			
	6.23.1	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 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 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. Worker organisations are expected to fairly represent the workers in the workforce.		

6.24	Non-Discrimination and Equal Opportunity		
	6.24.1	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 Clause's requirements. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on inherent requirements of the job shall not be deemed discrimination.	
7	Plant,	Materials and Workmanship	
7.1	Manne	er of Execution	
	7.1.1	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	Sampl	es	
	7.2.1	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.	
	7.2.2	Each sample shall be labelled as to origin and intended use in the Works.	

7.3	Inspection		
	7.3.1	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.	
	7.3.2	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.	
	7.3.3	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		
	7.4.1	This GC Clause shall apply to all tests specified in the Contract, other than the Tests after Completion (if any).	
	7.4.2	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.	
	7.4.3	The Engineer may, under GC 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.	

	7.4.4	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.
	7.4.5	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 GC Clause 20.1 [Contractor's Claims] to:
		(a) an extension of time for any such delay, if completion is or will be delayed, under GC 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.
	7.4.6	After receiving this notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine these matters.
	7.4.7	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	Rejecti	on
	7.5.1	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.
	7.5.2	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 GC Clause 2.5 [Employer's Claims] pay these costs to the Employer.

7.6	Remed	ial Work	
	7.6.1	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.	
	7.6.2	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 GC Clause 7.6.1(c).	
	7.6.3	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 GC Clause 2.5 [Employer's Claims] pay to the Employer all costs arising from this failure.	
7.7	Ownership of Plant and Materials		
	7.7.1	Except otherwise specified 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 GC Clause 8.10 [Payment for Plant and Materials in Event of Suspension].	
7.8	Royalti	ies	
	7.8.1	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	Commo	encement, Delays and Suspension	
8.1	Commencement of Works		
	8.1.1	Except as otherwise specified in the Particular Conditions, the Commencement Date shall be the date at which the following precedent conditions have all been fulfilled and the Engineer's instruction recording the agreement of both Parties on such fulfillment and instructing to commence the Works is received by the Contractor:	
		(a) signature of the Contract Agreement by both Parties, and if required, approval of the Contract by relevant authorities in the Country;	
		(b) delivery to the Contractor of reasonable evidence of the Employer's Financial arrangements (under GC Clause 2.4 [Employer's Financial Arrangements]);	
		(c) except if otherwise specified in the Particular Conditions, effective access to and possession of the Site given to the Contractor together with such permission(s) under GC Clause 1.13.2(a) [Compliance with Laws] as required for the commencement of the Works; and	
	_	f Advance Payment under GC Clause 14.2 [Advance Payment] shall not be a condition e for commencement of works.	
	8.1.2	If the above 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 GC Clause 16.2 [Termination by Contractor].	
	8.1.3	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 fo	or Completion	
	8.2.1	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 GC Clause 10.1 [Taking Over of the Works and Sections].	

8.3	Progra	amme
	8.3.1	The Contractor shall submit a detailed time programme to the Engineer within 28 days after receiving the notice under GC 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 GC 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
	8.3.2	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.
	8.3.3	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 GC Clause 13.3 [Variation Procedure].
	8.3.4	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 GC Clause.

8.4	Extens	sion of Time for Completion
	8.4.1	The Contractor shall be entitled subject to GC Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that completion for the purpose of GC 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 GC 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 Clause o 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.
	8.4.2	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 GC Clause 20.1 [Contractor's Claims]. When determining each extension of time under GC Clause 20.1, the Engineer shall review previous determinations and may increase, but shall not decrease, the total extension of time.
8.5	Delays	s Caused by Authorities
	8.5.1	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 GC Claus 8.4.1(b) [Extension of Time for Completion].

8.6	Rate o	f Progress
	8.6.1	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 GC Clause 8.3 [Programme],
		other than as a result of a cause listed in GC Clause 8.4 [Extension of Time for Completion], then the Engineer may instruct the Contractor to submit, under GC 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.
	8.6.2	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 GC Clause 2.5 [Employer's Claims] pay these costs to the Employer, in addition to delay damages (if any) under GC Clause 8.7 below.
	8.6.3	Additional costs of revised methods, including acceleration measures, instructed by the Engineer to reduce delays resulting from causes listed under GC 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
	8.7.1	If the Contractor fails to comply with GC Clause 8.2 [Time for Completion], the Contractor shall subject to notice under GC 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 Particular Conditions, 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 GC Clause shall not exceed the maximum amount of delay damages (if any) stated in the Particular Conditions.
	8.7.2	These delay damages shall be the only damages due from the Contractor for such default other than in the event of termination under GC 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	Suspens	sion of Work
	8.8.1	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.
	8.8.2	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 GC Clauses 8.9, 8.10 and 8.11 shall not apply.
8.9	Conseq	uences of Suspension
	8.9.1	If the Contractor suffers delay and/or incurs Cost from complying with the Engineer's instructions under GC 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 GC Clause 20.1 [Contractor's Claims] to:
		(a) an extension of time for any such delay, if completion is or will be delayed, under GC Clause 8.4 [Extension of Time for Completion], and
		(b) payment of any such Cost, which shall be included in the Contract Price.
	8.9.2	After receiving this notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine these matters.
	8.9.3	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 GC Clause 8.8 [Suspension of Work].
8.10	Paymen	nt for Plant and Materials in Event of Suspension
	8.10.1	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			
	8.11.1	If the suspension under GC 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 GC 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 GC Clause 16.2 [Termination by Contractor].		
8.12	Resum	nption of Work		
	8.12.1	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 GC Clause 13 [Variations and Adjustments].		
9	Tests o	on Completion		
9.1	Contractor's Obligations			
	9.1.1	The Contractor shall carry out the Tests on Completion in accordance with this GC Clause and GC Clause 7.4 [Testing], after providing the documents in accordance with GC Clause 4.1.6(d) [Contractor's General Obligations].		
	9.1.2	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.		
	9.1.3	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	Delaye	ed Tests		
	9.2.1	If the Tests on Completion are being unduly delayed by the Employer, GC Clause 7.4 [Testing] (fifth paragraph) and/or GC Clause 10.3 [Interference with Tests on Completion] shall be applicable.		

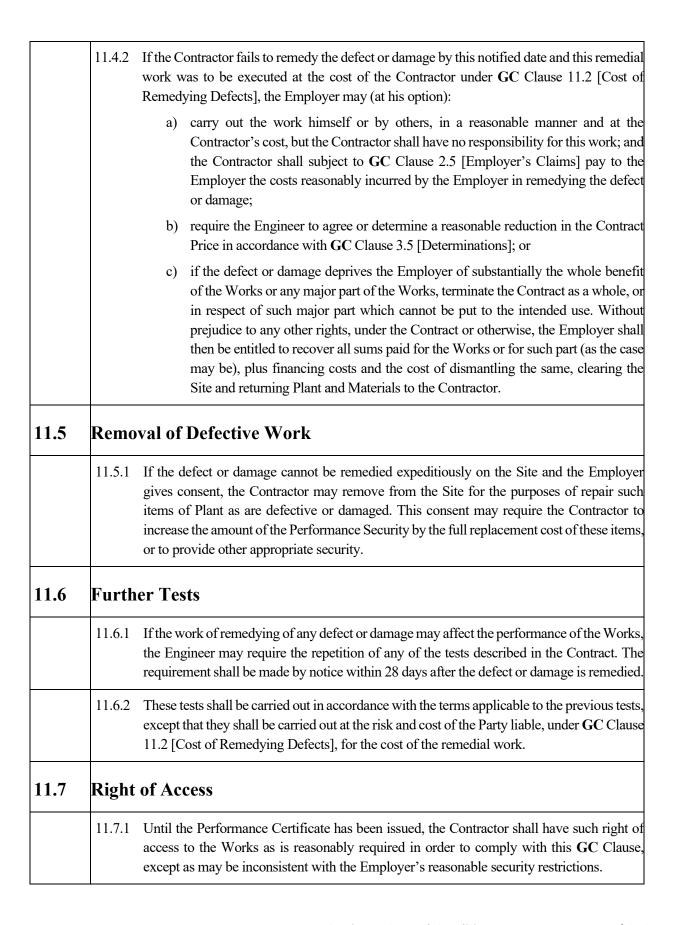
	9.2.2	If the Tests on Completion are being unduly delayed by the Contractor, the Engineer may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the Tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.
	9.2.3	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	Retest	ing
	9.3.1	If the Works, or a Section, fail to pass the Tests on Completion, GC 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	Failur	re to Pass Tests on Completion
	9.4.1	If the Works, or a Section, fail to pass the Tests on Completion repeated under GC Clause 9.3 [Retesting], the Engineer shall be entitled to:
		(a) order further repetition of Tests on Completion under GC Clause 9.3;
		(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 GC Clause 11.4.2(c) [Failure to Remedy Defects]; or
		(c) issue a Taking-Over Certificate, if the Employer so requests.
	9.4.2	In the event of GC Clause 9.4.1(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 GC Clause 2.5 [Employer's Claims] and GC Clause 3.5 [Determinations].

10	Emplo	yer's Taking Over		
10.1	Taking Over of the Works and Sections			
	10.1.1	Except as stated in GC 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 GC Clause 8.2 [Time for Completion] and except as allowed in GC Clause 10.1.3(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 GC Clause.		
	10.1.2	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.		
	10.1.3	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 GC Clause.		
	10.1.4	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	g Over of Parts of the Works		
	10.2.1	The Engineer may, at the sole discretion of the Employer, issue a Taking-Over Certificate for any part of the Permanent Works.		

10.2.2 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, the Contractor shall cease to be liable for the care of such part as from this date, b) 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 10.2.3 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. 10.2.4 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 GC 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 GC Clause 3.5 [Determinations] to agree or determine this Cost and profit. 10.2.5 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 GC 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 GC Clause 8.7 [Delay Damages], and shall not affect the maximum amount of these damages. 10.3 Interference with Tests on Completion 10.3.1 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.

	11.1.2	If a defect appears or damage occurs, the Contractor shall be notified accordingly, by (or on behalf of) the Employer.		
		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).		
		 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 		
	11.1.1	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:		
11.1	Compl	etion of Outstanding Work and Remedying Defects		
11	Defects	s Liability		
	10.3.5	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.		
10.4	Surfaces Requiring Reinstatement			
	10.3.4	After receiving this notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine these matters.		
		 b) payment of any such Cost plus profit, which shall be included in the Contract Price. 		
		a) an extension of time for any such delay, if completion is or will be delayed, under GC Clause 8.4 [Extension of Time for Completion], and		
	10.3.3	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 GC Clause 20.1 [Contractor's Claims] to:		
	10.3.2	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.		

11.2	Cost of Remedying Defects			
	11.2.1	All work referred to in GC Clause 11.1.1(b) [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.		
	11.2.	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 GC Clause 13.3 [Variation Procedure] shall apply.		
11.3	Extension of Defects Notification Period			
	11.3.1	The Employer shall be entitled subject to GC 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 a damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.		
	11.3.2	If delivery and/or erection of Plant and/or Materials was suspended under GC Clause 8.8 [Suspension of Work] or GC Clause 16.1 [Contractor's Entitlement to Suspend Work], the Contractor's obligations under this GC 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	Failur	e to Remedy Defects		
	11.4.1	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.		



11.8	Contra	actor to Search			
	11.8.1	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 GC Clause 11.2 [Cost of Remedying Defects], the Cost of the search plus profit shall be agreed or determined by the Engineer in accordance with GC Clause 3.5 [Determinations] and shall be included in the Contract Price.			
11.9	Perfor	mance Certificate			
	11.9.1	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.			
	11.9.2	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 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.			
	11.9.3	Only the Performance Certificate shall be deemed to constitute acceptance of the Works.			
11.10	Unfulfilled Obligations				
	11.10.1	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				
	11.11.1	Upon receiving the Performance Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.			
	11.11.2	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.			
	11.11.3	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			
	12.1.1	The Works shall be measured, and valued for payment, in accordance with this GC Clause. The Contractor shall show in each application under GC Clauses 14.3 [Application for Interim Payment Certificates], 14.10 [Statement at 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.		
	12.1.2	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.		
	12.1.3	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.		
	12.1.4	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.		
	12.1.5	If the Contractor examines and disagrees with 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	Metho	d of Measurement		
	12.2.1	Except as otherwise stated in the Contract and notwithstanding local practice:		
		 measurement shall be made of the net actual quantity of each item of the Permanent Works, and 		
		 the method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules. 		
<u> </u>				

12.3	Evalua	tion	
	12.3.1	GC Clause each item of	therwise stated in the Contract, the Engineer shall proceed in accordance with 3.5 [Determinations] to agree or determine the Contract Price by evaluating of work, applying the measurement agreed or determined in accordance with GC Clauses 12.1 and 12.2 and the appropriate rate or price for the item.
	12.3.2		em of work, the appropriate rate or price for the item shall be the rate or price or such item in the Contract or, if there is no such item, specified for similar
	12.3.3	specified sh	of work included in the Bill of Quantities for which no rate or price was nall be considered as included in other rates and prices in the Bill of Quantities to be paid for separately.
	12.3.4	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 GC 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.
	12.3.5	with reason 12.3.4(a) ar new rate on	ate or price shall be derived from any relevant rates or prices in the Contract, nable adjustments to take account of the matters described in GC Clause ad/or (b), as applicable. If no rates or prices are relevant for the derivation of a price, it shall be derived from the reasonable Cost of executing the work, th profit, taking account of any other relevant matters.
	12.3.6	determine a	ime as an appropriate rate or price is agreed or determined, the Engineer shall a provisional rate or price for the purposes of Interim Payment Certificates as concerned Works commences.

12.4	Omissions				
	12.4.1	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;			
	12.4.2	then the Contractor shall give notice to the Engineer accordingly, with supporting particulars. Upon receiving this notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine this cost, which shall be included in the Contract Price.			
13	Variat	tions and Adjustments			
13.1	Right	to Vary			
	13.1.1	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.			
	13.1.2	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.			

	13.1.3	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.
	13.1.4	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 1	Engineering
	13.2.1	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.
	13.2.2	The proposal shall be prepared at the cost of the Contractor and shall include the items listed in GC Clause 13.3 [Variation Procedure].
	13.2.3	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) GC Clauses 4.1.6(a), 4.1.6(b), 4.1.6(c), and 4.1.6(d) [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 GC 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:
		 such reduction in contract value, resulting from the change, excluding adjustments under GC Clause 13.7 [Adjustments for Changes in Legislation] and GC Clause 13.8 [Adjustments for Changes in Cost], and
		 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.
	13.2.4	However, if amount (i) is less than amount (ii), there shall not be a fee.
13.3	Variat	ion Procedure
	13.3.1	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) 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 GC Clause 8.3 [Programme] and to the Time for Completion, and
		c) the Contractor's proposal for evaluation of the Variation.
	13.3.2	The Engineer shall, as soon as practicable after receiving such proposal (under GC Clause 13.2 [Value Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.
	13.3.3	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.
	13.3.4	Each Variation shall be evaluated in accordance with GC Clause 12 [Measurement and Evaluation], unless the Engineer instructs or approves otherwise in accordance with this GC Clause.

13.4	Payme	ent in Applicable Currencies
	13.4.1	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	Provis	ional Sums
	13.5.1	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 GC 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 GC 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 Particular Conditions shall be applied.
	13.5.2	The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.
13.6	Day w	ork
	13.6.1	For work of a minor or incidental nature, the Engineer may instruct that a Variation shall be executed on a day work basis. The work shall then be valued in accordance with the Day work Schedule included in the Contract, and the following procedure shall apply. If a Day work Schedule is not included in the Contract, this GC Clause shall not apply.
	13.6.2	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.

	13.6.3	Except for any items for which the Day work 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.
	13.6.4	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 GC Clause 14.3 [Application for Interim Payment Certificates].
13.7	Adjus	tments for Changes in Legislation
	13.7.1	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.
	13.7.2	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 GC Clause 20.1 [Contractor's Claims] to:
		 a) an extension of time for any such delay, if completion is or will be delayed, under GC Clause 8.4 [Extension of Time for Completion], and
		b) payment of any such Cost, which shall be included in the Contract Price.
	13.7.3	After receiving this notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine these matters.
	13.7.4	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 GC Clause 13.8 [Adjustments for Changes in Cost].

13.8	Adjustments for Changes in Cost			
	13.8.1	In this GC 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 GC Clause shall not apply.		
	13.8.2	If this GC 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 GC Clause. To the extent that full compensation for any rise or fall in Costs is not covered by the provisions of this or other GC Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.		
	13.8.3	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:		
		Pn = a + b Ln/Lo + c En/Eo + d Mn/Mo +		
		where:		
		"Pn" 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 Particular Conditions;		
		"a" is a fixed coefficient, stated in the relevant table of adjustment data, representing the non-adjustable portion in contractual payments;		
		"b", "c", "d", 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;		
		"Ln", "En", "Mn", 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		
		"Lo", "Eo", "Mo", 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.		

13.8.4	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 (quoted in the fourth and fifth columns respectively of the table) for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.
13.8.5	In cases where the "currency of index" (stated in the table) 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
13.8.6	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.
13.8.7	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.
13.8.8	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 14.1.1 Unless otherwise stated in the Particular Conditions:		
	(a) the Contract Price shall be agreed or determined under GC 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 GC 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 GC 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; and		
	(e) notwithstanding the provisions of GC Clause 14.1.1(b), Contractor's Equipment, including essential spare parts therefore, 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		
	14.2.1 The Employer shall make an advance payment, as an interest-free loan for cash flow support in mobilization, when the Contractor submits a guarantee in accordance with this GC 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 Particular Conditions.		
	14.2.2 Unless and until the Employer receives this guarantee, or if the total advance payment is not stated in the Particular Conditions, this GC Clause shall not apply.		

14.2.3 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 GC Clause 14.3 [Application for Interim Payment Certificates]) and after the Employer receives (i) the Performance Security in accordance with GC 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 furnished in Section IX, Contract Forms or in another form approved by the Employer. 14.2.4 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. 14.2.5 Unless stated otherwise in the Particular Conditions, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Engineer in accordance with GC 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 20 per cent (20%) of the Accepted Contract Amount less Provisional Sums; and (b) deductions shall be made at the amortisation rate stated in the Particular Conditions 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 80 per cent (80%) of the Accepted Contract Amount less Provisional Sums has been certified for payment. 14.2.6 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 GC Clause 15 [Termination by Employer], GC Clause 16 [Suspension and Termination by Contractor] or GC Clause 19.6 [Optional Termination, Payment and Release] (as the case may be), the whole of the balance then outstanding shall immediately become due, and in case of termination under GC Clause 15 [Termination by Employer], except for GC Clause 15.5 [Employer's Entitlement to Termination for Convenience], payable by the Contractor to the Employer.

14.3	Appli	cation for Interim Payment Certificates
	14.3.1	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 GC Clause 4.21 [Progress Reports].
	14.3.2	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 this GC Clause 14.3.2 (b) to (g) below);
		(b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with GC Clause 13.7 [Adjustments for Changes in Legislation] and GC 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 Particular Conditions to the total of the above amounts, until the amount so retained by the Employer reaches the limit of Retention Money (it any) stated in the Particular Conditions
		(d) any amounts to be added for the advance payment (if more than one instalment) and to be deducted for its repayments in accordance with GC Clause 14.2 [Advance Payment];
		(e) any amounts to be added and deducted for Plant and Materials in accordance with GC 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 GC Clause 20 [Claims, Disputes and Arbitration]; and
		(g) the deduction of amounts certified in all previous Payment Certificates

14.4	Scheo	lule of Payments
	14.4.1	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 GC Clause 14.3.2(a) [Application for Interim Payment Certificates];
		(b) GC 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 GC 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
	14.4.2	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
	14.5.1	If this GC Clause applies, Interim Payment Certificates shall include, under GC Clause 14.3.2(e) [Application for Interim Payment Certificates], (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 GC Clause 14.3.2(a) [Application for Interim Payment Certificates].
	14.5.2	If the lists referred to in GC Clause 14.5.3(b)(i), or GC Clause 14.5.3(c)(i) below are not included in the Schedules, this GC Clause shall not apply.

14.5.3 The Engineer shall determine and certify each addition if the following conditions are satisfied: (a) the Contractor has: 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: 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 GC Clause: this guarantee may be in a similar form to the form referred to in GC 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. 14.5.4 The additional amount to be certified shall be the equivalent of eighty percent 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 GC Clause and of the contract value of the Plant and Materials. 14.5.5 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 GC Clause 14.3.2(a) [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
	14.6.1	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.
	14.6.2	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 Particular Conditions. In this event, the Engineer shall give notice to the Contractor accordingly.
	14.6.3	An Interim Payment Certificate shall not be withheld for any other reason, although: (a) if anything 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.
	14.6.4	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	4.7.1	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 GC Clause 4.2 [Performance Security] and GC Clause 14.2 [Advance Payment],
		of Acceptance or within 21 days after receiving the documents in accordance with
		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 GC Clause 16.2.
14	4.7.2	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 D	Delay	ed Payment
14	14.8.1	If the Contractor does not receive payment in accordance with GC 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 GC Clause 14.7 [Payment], irrespective (in the case of Clause 14.7.1(b)) of the date on which any Interim Payment Certificate is issued.
14	14.8.2	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.
14	14.8.3	The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy.

14.9	Paymo	ent of Retention Money
	14.9.1	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.
	14.9.2	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.
	14.9.3	However, if any work remains to be executed under GC Clause 11 [Defects Liability], the Engineer shall be entitled to withhold certification of the estimated cost of this work until it has been executed.
	14.9.4	When calculating these proportions, no account shall be taken of any adjustments under GC Clause 13.7 [Adjustments for Changes in Legislation] and GC Clause 13.8 [Adjustments for Changes in Cost].
	14.9.5	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 stipulated in Section IX, Contract Forms 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 GC 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 GC Clause 14.9.2. The Employer shall return the guarantee to the Contractor within 21 days after receiving a copy of the Performance Certificate.

	14.9.6	If the Performance Security required under GC 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	Statem	nent at Completion
	14.10.1	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 GC 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
	14.10.2	The Engineer shall then certify in accordance with GC Clause 14.6 [Issue of Interim Payment Certificates].
14.11	Applic	ation for Final Payment Certificate
	14.11.1	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.
	14.11.2	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 the 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".

	1	
	14.11.3	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 GC Clause 20.4 [Obtaining Dispute Board's Decision] or GC 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	Discha	arge
	14.12.1	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
	14.13.1	Within 28 days after receiving the Final Statement and discharge in accordance with GC Clause 14.11 [Application for Final Payment Certificate] and GC 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.
	14.13.2	If the Contractor has not applied for a Final Payment Certificate in accordance with GC Clause 14.11 [Application for Final Payment Certificate] and GC 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	Cessat	ion of Employer's Liability
	14.14.1	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 GC Clause 14.10 [Statement at Completion].
	14.14.2	However, this GC 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
	14.15.1 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 GC Clause 13.5 [Provisional Sums] and GC Clause 13.7 [Adjustments for Changes in Legislation] shall be made in the applicable currencies and proportions; and
	iii. other payments and deductions under GC Clauses 14.3.2(a), 14.3.2(b), 14.3.2(c), and 14.3.2(d) [Application for Interim Payment Certificates] shall be made in the currencies and proportions specified in GC Clause 14.15.1(a)(i) above;
	(b) payment of the damages specified in the Particular Conditions 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
	15.1.1 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			
	15.2.1 The Employer shall be entitled to terminate the Contract if the Contractor:			
	(a) fails to comply with GC Clause 4.2 [Performance Security] or with a notice under GC 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 GC Clause 8 [Commencement, Delays and Suspension], or 			
	ii. to comply with a notice issued under GC Clause 7.5 [Rejection] or GC 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			
	 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 GC Clause 15.2.1(f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination.			
	15.2.2 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 GC Clause 15.2.1(e) or (f), the Employer may by notice terminate the Contract immediately.			
	15.2.3 The Employer's election to terminate the Contract shall not prejudice any other rights of the Employer, under the Contract or otherwise.			

	15.2.4	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.
	15.2.5	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.
	15.2.6	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.
15.3	Valua	ation at Date of Termination
	15.3.1	As soon as practicable after a notice of termination under GC Clause 15.2 [Termination by Employer] has taken effect, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] 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	Paym	ent after Termination
	15.4.1	After a notice of termination under GC Clause 15.2 [Termination by Employer] has taken effect, the Employer may:
		a) proceed in accordance with GC Clause 2.5 [Employer's Claims],
		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 GC 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	Emplo	yer's Entitlement to Termination for Convenience
	15.5.1	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 GC 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 GC Clause 16.2 [Termination by Contractor].
	15.5.2	After this termination, the Contractor shall proceed in accordance with GC Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment] and shall be paid in accordance with GC Clause 16.4 [Payment on Termination].
15.6	Fraud	and Corruption
	15.6.1	If the Employer determines, based on reasonable evidence, that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of GC Clause 15 shall apply as if such expulsion had been made under GC Clause 15.2 [Termination by Employer].
	15.6.2	Should any employee of the Contractor be determined, based on reasonable evidence, to have engaged in corrupt, fraudulent, coercive or obstructive practice during the execution of the work then that employee shall be removed in accordance with GC Clause 6.9 [Contractor's Personnel].

- 15.6.3 It is the Bank's policy to require that Borrowers (including beneficiaries of Bank Financing), as well as bidders, suppliers, and contractors, and their agents (whether declared or not), subcontractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts¹. In pursuance of this policy, the Bank: a) defines, for the purposes of this provision, the terms set forth below as follows: "Corrupt Practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party; "Fraudulent Practice" is any act or omission, including a ii. misrepresentation that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation; iii. "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; and "Coercive Practice" is impairing or harming, or threatening to impair iv. or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party; "obstructive practice" is v. 1. 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
 - 2. acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under clause 1.15 [Inspections and Audits by the Bank]

the investigation or from pursuing the investigation, or

practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to

¹ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

- b) will reject a proposal for award if it determines that the bidder recommended for award or any of its personnel, or its agents, or its sub-consultants, subcontractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in Corrupt, Fraudulent, Collusive, Coercive or obstructive Practices in competing for the contract in question;
- c) will declare misprocurement and cancel the portion of the Financing allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of such Financing engaged in Corrupt, Fraudulent, Collusive, Coercive or Obstructive Practices during the procurement or the implementation of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank's sanctions procedures², including by publicly declaring such firm or individual ineligible either indefinitely or for a stated period of time, (i) to be awarded Bank-financed contracts and (ii) to be a nominated³ sub-contractor, consultant, supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and
- e) will require that a clause be included in bidding documents and in contracts financed by the Bank, requiring bidders, suppliers and contractors and their subcontractors, agents, personnel, consultants, service providers, or suppliers to permit the Bank to inspect all accounts and records and other documents relating to the submission of bids and contract performance and to have them audited by auditors appointed by the Bank.

² A firm or an individual may be declared ineligible to be awarded a Bank financed contract: (i) upon completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, or otherwise decided by the Bank; and through the application of the Proposal for the Implementation of a Sanctions Process within the African Development Bank Group; and (ii) as a result of temporary suspension or early temporary suspension in connection with an on-going sanction proceeding. See footnote 18 and paragraph 9 of Appendix 1 of the Rules and Procedures for Procurement of Goods and Works.

³ A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding documents) is one which has either been: (i) included by the bidder in its prequalification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirement for the particular bid; or (ii) appointed by the Borrower."

16	Suspe	nsion and Termination by Contractor	
16.1	Contractor's Entitlement to Suspend Work		
	16.1.1	If the Engineer fails to certify in accordance with GC Clause 14.6 [Issue of Interim Payment Certificates] or the Employer fails to comply with GC Clause 2.4 [Employer's Financial Arrangements] or GC 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.	
	16.1.2	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 GC 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.	
	16.1.3	The Contractor's action shall not prejudice his entitlements to financing charges under GC Clause 14.8 [Delayed Payment] and to termination under GC Clause 16.2 [Termination by Contractor].	
	16.1.4	If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant GC Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.	
	16.1.5	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 GC Clause, the Contractor shall give notice to the Engineer and shall be entitled subject to GC Clause 20.1 [Contractor's Claims] to:	
		(a) an extension of time for any such delay, if completion is or will be delayed, under GC 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	
	16.1.6	After receiving this notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine these matters.	

16.2	Termination by Contractor
	16.2.1 The Contractor shall be entitled to terminate the Contract if: the Contractor does not receive the reasonable evidence within 42 days after giving notice under GC Clause 16.1 [Contractor's Entitlement to Suspend Work] in respect of a failure to comply with GC Clause 2.4 [Employer's Financial Arrangements],
	(a) the Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate,
	(b) the Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in GC Clause 14.7 [Payment] within which payment is to be made (except for deductions in accordance with GC Clause 2.5 [Employer's Claims]),
	(c) 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,
	(d) the Employer fails to comply with GC Clause 1.6 [Contract Agreement] or GC Clause 1.7 [Assignment],
	(e) a prolonged suspension affects the whole of the Works as described in GC Clause 8.11 [Prolonged Suspension], or
	(f) 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.
	(g) 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 GC Clause 8.1 [Commencement of Works].
	16.2.2 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 GC Clause 16.2.1(f) or (g), the Contractor may by notice terminate the Contract immediately.

16.2.3 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 GC Clause 14.7 [Payment] for payments under Interim Payment certificates, the Contractor may, without prejudice to the Contractor's entitlement to financing charges under GC Clause 14.8 [Delayed Payment], take one of the following actions, namely (i) suspend work or reduce the rate of work under GC Clause 16.1.3 above, or (ii) terminate his employment under 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. 16.2.4 The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor, under the Contract or otherwise. 16.3 Cessation of Work and Removal of Contractor's Equipment 16.3.1 After a notice of termination under GC Clause 15.5 [Employer's Entitlement to Termination for Convenience], GC Clause 16.2 [Termination by Contractor] or GC Clause 19.6 [Optional Termination, Payment and Release] has taken effect, the Contractor shall promptly: (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 16.4.1 After a notice of termination under GC Clause 16.2 [Termination by Contractor] has taken effect, the Employer shall promptly: (a) return the Performance Security to the Contractor, (b) pay the Contractor in accordance with GC Clause 19.6 [Optional Termination, Payment and Release], 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 a	and Responsibility	
17.1	Indemnities		
	17.1.1	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.	
	17.1.2	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 GC Clause 18.3.3(d)(i), (ii) and (iii) [Insurance Against Injury to Persons and Damage to Property].	
17.2	Contr	actor's Care of the Works	
	17.2.1	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 GC 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.	
	17.2.2	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.	

		7
	17.2.3	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 GC 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.
	17.2.4	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	Empl	oyer's Risks
	17.3.1	The risks referred to in GC 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) use or occupation by the Employer of any part of the Permanent Works, except as may be specified in the Contract,
		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 preventative precautions.
17.4	Conse	equences of Employer's Risks
	17.4.1	If and to the extent that any of the risks listed in GC 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.

	17.4.2	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 GC Clause 20.1 [Contractor's Claims] to:
		(a) an extension of time for any such delay, if completion is or will be delayed, underGC 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 GC Clause 17.3.1(f) and (g) [Employer's Risks], Cost plus profit shall be payable.
	17.4.3	After receiving this further notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine these matters.
17.5	Intelle	ectual and Industrial Property Rights
	17.5.1	In this GC 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.
	17.5.2	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 GC Clause.
	17.5.3	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:
		 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.
	17.5.4	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.

	17.5.5	If a Party is entitled to be indemnified under this GC 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	Limita	ation of Liability
	17.6.1	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 GC Clause 8.7 [Delay Damages]; GC Clause 11.2 [Cost of Remedying Defects]; GC Clause 15.4 [Payment after Termination]; GC Clause 16.4 [Payment on Termination]; GC Clause 17.1 [Indemnities]; GC Clause 17.4 (b) [Consequences of Employer's Risks] and GC Clause 17.5 [Intellectual and Industrial Property Rights].
	17.6.2	The total liability of the Contractor to the Employer, under or in connection with the Contract other than under GC Clause 4.19 [Electricity, Water and Gas], GC Clause 4.20 [Employer's Equipment and Free-Issue Material], GC Clause 17.1 [Indemnities] and GC 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 Particular Conditions, or (if such multiplier or other sum is not so stated) the Accepted Contract Amount.
	17.6.3	This GC 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
	17.7.1	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).
	17.7.2	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	Insura	ance
18.1	Gener	al Requirements for Insurances
	18.1.1	In this GC Clause, "insuring Party" means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant GC Clause.
	18.1.2	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 GC Clause
	18.1.3	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 GC Clause.
	18.1.4	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 GC 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.
	18.1.5	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.
	18.1.6	The relevant insuring Party shall, within the respective periods stated in the Particular Conditions (calculated from the Commencement Date), submit to the other Party: (a) 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. (b) copies of the policies for the insurances described in GC Clause 18.2 [Insurance
		for Works and Contractor's Equipment] and GC Clause 18.3 [Insurance against Injury to Persons and Damage to Property].
	18.1.7	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.

	18.1.8	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 GC Clause.
	18.1.9	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.
	18.1.10	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 GC 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.
	18.1.11	Nothing in this GC 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.
	18.1.12	Payments by one Party to the other Party shall be subject to GC Clause 2.5 [Employer's Claims] or GC Clause 20.1 [Contractor's Claims], as applicable.
	18.1.13	The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to GC Clause 18) with insurers from any eligible source country, in accordance with the Bank's Rules and Procedures for Procurement of Goods and Works.
18.2	Insura	nce for Works and Contractor's Equipment
	18.2.1	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 GC Clause 18.1.6(a) [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.

18.2.2 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 of damage caused by the Contractor in the course of any other operations (including those under GC Clause 11 [Defects Liability]). 18.2.3 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. 18.2.4 Unless otherwise stated in the Particular Conditions, insurances under this GC 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 GC 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 GC Clause 17.3.1(c), (g) and (h) [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 Particular Conditions (if an amount is not so stated, this GC Clause 18.2.4(d) shall not apply), and (e) may however exclude loss of, damage to, and reinstatement of: 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 GC Clause 18.2.4(e)(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 GC Clause 14.5 [Plant and Materials intended for the Works].

	18.2.5	If, more than one year after the Base Date, the cover described in GC Clause 18.2.4(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 GC 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 GC Clause 18.1 [General Requirements for Insurances].
18.3	Insura	ance against Injury to Persons and Damage to Property
	18.3.1	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 GC Clause 18.2 [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under GC 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.
	18.3.2	This insurance shall be for a limit per occurrence of not less than the amount stated in the Particular Conditions, with no limit on the number of occurrences. If an amount is not stated in the Particular Conditions, this GC Clause shall not apply.
	18.3.3	Unless otherwise stated in the Particular Conditions, the insurances specified in this GC 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 GC 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:
		 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 GC Clause 17.3 [Employer's Risks], except to the extent that cover is available at commercially reasonable terms.
18.4	Insura	ance for Contractor's Personnel
	18.4.1	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.

	18.4.2	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.
	18.4.3	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 GC Clause.
19	Force	Majeure
19.1	Defini	tion of Force Majeure
	19.1.1	In this GC Clause, "Force Majeure" means an exceptional event or circumstance:
		a) which is beyond a Party's control,
		 which such Party could not reasonably have provided against before entering into the Contract,
		 which, having arisen, such Party could not reasonably have avoided or overcome, and
		d) which is not substantially attributable to the other Party.
	19.1.2	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:
		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,
		 riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,
		 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
		e) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.
19.2	Notice	of Force Majeure
	19.2.1	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.
	19.2.2	The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

	19.2.3	Notwithstanding any other provision of this GC Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract
19.3	Duty 1	to Minimise Delay
	19.3.1	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.
	19.3.2	A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.
19.4	Conse	equences of Force Majeure
	19.4.1	If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under GC 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 GC Clause 20.1 [Contractor's Claims] to:
		(a) an extension of time for any such delay, if completion is or will be delayed, under GC Clause 8.4 [Extension of Time for Completion], and
		(b) if the event or circumstance is of the kind described in GC Clause 19.1.2(i) to (iv) [Definition of Force Majeure] and, in the case of GC Clause 19.1.2(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 destructed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in GC Clause 18.2 [Insurance for Works and Contractor's Equipment].
	19.4.2	After receiving this notice, the Engineer shall proceed in accordance with GC Clause 3.5 [Determinations] to agree or determine these matters.
19.5	Force	Majeure Affecting Subcontractor
	19.5.1	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 GC 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 GC Clause.

19.6	Option	nal Termination, Payment and Release
	19.6.1	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 GC 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 GC Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment].
	19.6.2	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 Costs 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	
	19.7.1	Notwithstanding any other provision of this GC 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 GC Clause 19.6 [Optional Termination, Payment and Release] if the Contract had been terminated under GC Clause 19.6.
20	Claims	, Disputes and Arbitration
20.1	Contractor's Claims	
	20.1.1	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.
	20.1.2	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 GC Clause shall apply.
	20.1.3	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.
	20.1.4	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 GC 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.

20.1.5 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 20.1.6 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. 20.1.7 Within the above defined period of 42 days, the Engineer shall proceed in accordance with GC 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 GC 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 have been 20.1.8 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 GC Clause, either 20.1.9 Party may consider that the claim is rejected by the Engineer and any of the Parties may refer it to the Dispute Board in accordance with GC Clause 20.4 [Obtaining Dispute Board's Decision]. 20.1.10 The requirements of this GC Clause are in addition to those of any other GC Clause which may apply to a claim. If the Contractor fails to comply with this or another GC 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 GC Clause.

20.2	Appoi	ntment of the Dispute Board
	20.2.1	Disputes shall be referred to a DB for decision in accordance with GC Clause 20.4 [Obtaining Dispute Board's Decision]. The Parties shall appoint a DB by the date stated in the Particular Conditions.
	20.2.2	The DB shall comprise, as stated in the Particular Conditions, 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.
	20.2.3	If the Parties have not jointly appointed the DB 21 days before the date stated in the Particular Conditions 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.
	20.2.4	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.
	20.2.5	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.
	20.2.6	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.
	20.2.7	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.
	20.2.8	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 GC Clause.
	20.2.9	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 GC Clause 14.12 [Discharge] shall have become effective.

20.3	Failur	e to Agree on the Composition of the Dispute Board
	20.3.1	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 GC 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,
	either or DB. This	appointing entity or official named in the Particular Conditions shall, upon the request of both of the Parties and after due consultation with both Parties, appoint this member of the appointment shall be final and conclusive. Each Party shall be responsible for paying one e remuneration of the appointing entity or official.
20.4	Obtair	ning Dispute Board's Decision
	20.4.1	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 GC Clause.
	20.4.2	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.
	20.4.3	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).
	20.4.4	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 GC 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.
	20.4.6	In either event, this notice of dissatisfaction shall state that it is given under this GC Clause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Except as stated in GC Clause 20.7 [Failure to Comply with Dispute Board's Decision] and GC 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 GC Clause.
	20.4.7	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	Amica	able Settlement
	20.5.1	Where a notice of dissatisfaction has been given under GC 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 GC Clause 20.4 above, should move to commence arbitration after the fifty-sixth (56) day from the day on which a notice of dissatisfaction was given, even if no attempt at amicable settlement has been made.

20.6	Arbiti	ration
	20.6.1	Any dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with GC 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) for contracts with foreign contractors, international arbitration (i) with proceedings administered by the arbitration institution designated in the Particular Conditions, and conducted under the rules of arbitration of such institution; or, if so specified in the Particular Conditions, (ii) international arbitration in accordance with the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL); or (iii) if neither an arbitration institution or UNCITRAL arbitration rules is specified in the Particular Conditions, 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 the said arbitration rules.
		The place of arbitration shall be the neutral location specified in the Particular Conditions, and the arbitration shall be conducted in the language for communications defined in GC Clause 1.4 [Law and Language].
		(b) for contracts with domestic contractors, arbitration with proceedings conducted in accordance with the laws of the Employer's country.
	20.6.2	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.
	20.6.3	Neither Party shall be limited in the proceedings before the arbitrators to the evidence nor 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.
	20.6.4	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	e to Comply with Dispute Board's Decision	
	20.7.1	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 GC Clause 20.6 [Arbitration]. GC Clause 20.4 [Obtaining Dispute Board's Decision] and GC Clause 20.5 [Amicable Settlement] shall not apply to this reference.
20.8 Expiry of Dispute Board's Appoin		y of Dispute Board's Appointment
	20.8.1	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) GC Clause 20.4 [Obtaining Dispute Board's Decision] and GC Clause 20.5 [Amicable Settlement] shall not apply, and
		(b) the dispute may be referred directly to arbitration under GC Clause 20.6 [Arbitration].

Section X - Contract Forms

Table of Forms

Notification of Intention to Award	291
Beneficial Ownership Disclosure Form	294
Letter of Acceptance	296
Contract Agreement	297
Performance Security: Option 1: Demand Guarantee	298
Performance Security: Option 2: Performance Bond	299
Environmental and Social (ES) Performance Security	301
Advance Payment Security	302
Retention Money Security	304

Notification of Intention to Award

[This Notification of Intention to Award shall be sent to each Bidder that submitted a Bid.]
[Send this Notification to the Bidder's Authorized Representative named in the Bidder Information Form]

For the attention of Bidder's Authorized Representative

Name: [insert Authorized Representative's name] Address: [insert Authorized Representative's Address]

Telephone/Fax numbers: [insert Authorized Representative's telephone/fax numbers]

Email Address: [insert Authorized Representative's email address]

[IMPORTANT: insert the date that this Notification is transmitted to Bidders. The Notification must be sent to all Bidders simultaneously. This means on the same date and as close to the same time as possible.]

DATE OF TRANSMISSION: This Notification is sent by: [email/fax] on [date] (local time)

Notification of Intention to Award

Employer: [insert the name of the Employer]

Project: [insert name of project]

Contract title: [insert the name of the contract] **Country:** [insert country where RFB is issued]

Loan No. /Credit No. / Grant No.: [insert reference number for loan/credit/grant]

RFB No: [insert RFB reference number from Procurement Plan]

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period you may:

- a) request a debriefing in relation to the evaluation of your Bid, and/or
- b) submit a Procurement-related Complaint in relation to the decision to award the contract.

1. The successful Bidder

Name: [insert name of successful Bidder]

Address: [insert address of the successful Bidder]

Contract price: [insert contract price of the successful Bid]

2. Other Bidders [INSTRUCTIONS: insert names of all Bidders that submitted a Bid. If the Bid's price was evaluated include the evaluated price as well as the Bid price as read out.]

	Section X:	Contract	Forms		Page	291
--	------------	----------	--------------	--	------	-----

Name of Bidder	Bid price	Evaluated Bid price (if applicable)
[insert name]	[insert Bid price]	[insert evaluated price]
[insert name]	[insert Bid price]	[insert evaluated price]
[insert name]	[insert Bid price]	[insert evaluated price]
[insert name]	[insert Bid price]	[insert evaluated price]
[insert name]	[insert Bid price]	[insert evaluated price]

3. Reason/s why your Bid was unsuccessful

[INSTRUCTIONS: State the reason/s why this Bidder's Bid was unsuccessful. Do NOT include: (a) a point by point comparison with another Bidder's Bid or (b) information that is marked confidential by the Bidder in its Bid.]

4. How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on [insert date] (local time).

You may request a debriefing in relation to the results of the evaluation of your Bid. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award.

Provide the contract name, reference number, name of the Bidder, contact details; and address the request for debriefing as follows:

Attention: [insert full name of person, if applicable]

Title/position: [insert title/position]

Agency: [insert name of Employer] **Email address**: [insert email address]

Fax number: [insert fax number] delete if not used

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Contract Award Notice.

5. How to make a complaint

Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [insert date] (local time).

Provide the contract name, reference number, name of the Bidder, contact details; and address the Procurement-related Complaint as follows:

Section X:	Contract I	Forms	Page	292

Attention: [insert full name of person, if applicable]

Title/position: [insert title/position]

Agency: [insert name of Employer] **Email address**: [insert email address]

Fax number: [insert fax number] delete if not used

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

Further information:

For more information see Part B of the Operations Procurement Manual. In summary, there are four essential requirements:

- 1. You must be an 'interested party'. In this case, that means a Bidder who submitted a Bid in this bidding process, and is the recipient of a Notification of Intention to Award.
- 2. The complaint can only challenge the decision to award the contract.
- 3. You must submit the complaint within the period stated above.
- 4. You must include, in your complaint, all necessary information

6. Standstill Period

DEADLINE: The Standstill Period is due to end at midnight on [insert date] (local time).

The Standstill Period lasts ten (10) Business Days after the date of transmission of this Notification of Intention to Award.

The Standstill Period may be extended as stated in Section 4 above.

If you have any questions regarding this Notification, please do not hesitate to contact us.

On behalf of the	Employer:	
Signature:		
Name:		
Title/position:		
Telephone:		
Email:		

Beneficial Ownership Disclosure Form

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful Bidder¹. In case of joint venture, the Bidder must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Bidder is any natural person who ultimately owns or controls the Bidder by meeting one or more of the following conditions:

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder

RFB No.: [insert number of RFB process]

Request for Bid No.: [insert identification]

To: [insert complete name of Employer]

In response to your request in the Letter of Acceptance dated [insert date of letter of Acceptance] to furnish additional information on beneficial ownership: [select one option as applicable and delete the options that are not applicable]

(i) we hereby provide the following beneficial ownership information.

Details of beneficial ownership

Identity of Beneficial Owner	Directly or indirectly holding 25% or more of the shares (Yes / No)	Directly or indirectly holding 25 % or more of the Voting Rights (Yes / No)	Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Bidder (Yes / No)
[include full name (last, middle, first), nationality, country of residence]			

OR

Section X: Contract Forms	Page	294
---------------------------	------	-----

- (ii) We declare that there is no Beneficial Owner meeting one or more of the following conditions:
 - directly or indirectly holding 25% or more of the shares
 - directly or indirectly holding 25% or more of the voting rights
 - directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder

OR

(iii) We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Bidder shall provide explanation on why it is unable to identify any Beneficial Owner]

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder]"

Name of the Bidder: *[insert complete name of the Bidder]

Name of the person duly authorized to sign the Bid on behalf of the Bidder: **[insert complete name of person duly authorized to sign the Bid]

Title of the person signing the Bid: [insert complete title of the person signing the Bid]

Signature of the person named above: [insert signature of person whose name and capacity are shown above]

Date signed [insert date of signing] **day of** [insert month], [insert year]

^{*} In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder. In the event that the Bidder is a joint venture, each reference to "Bidder" in the Beneficial Ownership Disclosure Form (including this Introduction thereto) shall be read to refer to the joint venture member.

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

Letter of Acceptance

[letterhead paper of the Employer]

[date]

To: [name and address of the Contractor]

This is to notify you that your Bid dated [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 Agency.

You are requested to furnish (i) the Performance Security and an Environmental and Social Performance Security [Delete ES Performance Security if it is not required under the contract] within 28 days in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms and the ES Performance Security Form, [Delete reference to the ES Performance Security Form if it is not required under the contract] and (ii) the additional information on beneficial ownership in accordance with BDS ITB 47.1, within eight (8) Business days using the Beneficial Ownership Disclosure Form, included in Section X, Contract Forms, of the bidding document.

Authorized Signature:	
Name and Title of Signatory:	
Name of Agency:	

Attachment: Contract Agreement

Section X: Contract Forms _____ Page | 296

Contract Agreement

TH	HIS AGREEMENT made the	_ day of,, between
	of	(hereinafter "the Employer"), of the one part, and
	of	day of,, between (hereinafter "the Employer"), of the one part, and (hereinafter "the Contractor"), of the other part:
sho	HEREAS the Employer desires that the nould be executed by the Contractor, and ompletion of these Works and the remedy	has accepted a Bid by the Contractor for the execution and
Th	he Employer and the Contractor agree as	follows:
1.	In this Agreement words and expression to them in the Contract documents refe	ns shall have the same meanings as are respectively assigned rred to.
2.	The following documents shall be de Agreement. This Agreement shall preven	emed to form and be read and construed as part of this ail over all other Contract documents.
	including, but not limited i. the ES Management	(if any); ; s and any other documents forming part of the contract,
3.	Agreement, the Contractor hereby co	made by the Employer to the Contractor as specified in this venants with the Employer to execute the Works and to all respects with the provisions of the Contract.
4.	completion of the Works and the remed	pay the Contractor in consideration of the execution and ying of defects therein, the Contract Price or such other sum ovisions of the Contract at the times and in the manner
		ve caused this Agreement to be executed in accordance with on the day, month and year specified above.
Sig	gned by	(for the Employer)
Sig	gned by	(for the Contractor)

Performance Security: Option 1: Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: [insert name and Address of Employer]
Date:[Insert date of issue]
Performance Guarantee No.:
Performance Guarantee No.:
We have been informed that (hereinafter called "the Applicant") has entered into
We have been informed that (hereinafter called "the Applicant") 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.
according to the conditions of the Contract, a performance guarantee is required.
At the request of the Applicant to issue this guarantee, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of(), 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 complying 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 Applicant 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(s)]
Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

	Section	X:	Contract F	orms		Page	29	į
--	---------	----	------------	------	--	------	----	---

The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount 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.

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."

Performance Security: Option 2: Performance Bond

•	nis	Bond_			as	Principal	(hereinafter				_
and	o fta	r colled	"the Sur	aty") oro h	ald and fi	rmly hound	unto		as	Sure	ety
(herein	iarie	r called	"the Em	olover") in	the amou	int of	unto	for th	e pavm	as Cong ent of whi	ich
sum w	ell a	nd truly	to be ma	de in the t	ypes and 1	oroportions	of currencies i	n which	the Cor	ntract Price	is
payabl	e, t	he Con	tractor a	nd the Su	irety bind	d themselv	es, their heirs	s, execut	ors, ad	lministrato	rs,
succes	sors	and assi	igns, join	tly and sev	erally, fin	mly by thes	se presents.				
		a 1 a				•	. •.4 .4	F 1	•		
						_	ement with the				•
01 <u> </u>	cati	, 20 one and), 10 amendr	r ents theret	o which t	III	accordance w t herein provid	/iin ine ed for ar	docum e by ref	ienis, piai ference ma	ns, de
				ter referred			i nerem provid	ca 101, a1	c by ici	iciciice illa	uc
							ch that, if the C	Contracto	r shall 1	promptly a	nd
							ments thereto),				
null an	d vo	oid; othe	erwise, it	shall remai	in in full 1	force and ef	fect. Wheneve	r the Con	itractor	shall be, a	nd
							ntract, the Emp				he
Emplo	yer'	s obliga	tions the	eunder, the	e Surety r	nay prompt	ly remedy the	default, o	r shall	promptly:	
(1)	co	mplete t	he Contr	act in acco	rdance wi	th its terms	and conditions	s; or			
/- \											
(2)							mission to the				
							ns, and upon de rrange for a C		•		
							sses (even thou				
							Contracts of co				
							letion less the I	•	_		
	bи	t not ex	ceeding,	including	other co	sts and dar	nages for which	ch the Si	urety m	nay be lial	ole
							h hereof. The t				
							he total amou				
	C	ontractor	: under tr	ie Contract	t, less the	amount pro	perly paid by I	ımpioyer	to Con	itractor; or	
(3)	_	-			_		yer to complete				ice
	wi	th its ter	ms and c	onditions u	up to a tot	al not excee	eding the amou	ınt of this	Bond.		
Tl C.,	4	11	. 4 l 1: . l.	1. f	4	41 41	: C J 14	- £41.: - D	1		
The Su	irety	Shan no	n de nad	ie for a gre	eater sum	man me spe	ecified penalty	of this B	ona.		
					tuted befo	re the expira	ation of one yes	ar from th	ne date (of the issui	ng
of the	I aki	ing-Ove	r Certific	ate.							
							e of any person				
Emplo	yer	named h	erein or t	he heirs, ex	xecutors, a	administrato	ors, successors,	and assig	gns of th	he Employ	er.
In testi	In testimony whereof, the Contractor has hereunto set its hand and affixed its seal, and the Surety has										
caused	caused these presents to be sealed with its corporate seal duly attested by the signature of its legal										
represe	enta	tive, this	;				day of			20	
							·				

SIGNED ON	on behalf of	
Ву	in the capacity of	
In the presence of		
SIGNED ON	on behalf of	
Ву	in the capacity of	
In the presence of		

Environmental and Social (ES) Performance Security

ES Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: [insert name and Address of Employer]
Date: [Insert date of issue] ES PERFORMANCE GUARANTEE No.: [Insert guarantee reference number]
Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]
Guarantor. [Insert name and duaress of place of issue, amess indicated in the tener neway
We have been informed that (hereinafter called "the Applicant") has entered into
We have been informed that (hereinafter called "the Applicant") has entered into Contract No dated with the Beneficiary, for the execution of (hereinafter called "the Contract"). Furthermore, we understand that,
(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 Applicant to issue this guarantee, we as Guarantor, hereby irrevocably undertake
to pay the Beneficiary any sum or sums not exceeding in total an amount of
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 complying 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 Applicant is in breach of its Environmental and/or Social (ES) 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.
The state of the s
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.
Tubication No. 736, except that the supporting statement under Afficie 13(a) is hereby excluded.
[signature(s)]
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 Accepted Contract Amount 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.

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."

Section X: Contract Forms _____ Page | 301

Advance Payment Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary:	[Insert name and Address of Employer]
Date:	[Insert date of issue]
ADVANCE PA	YMENT GUARANTEE No.: [Insert guarantee reference number]
Guarantor: [In	sert name and address of place of issue, unless indicated in the letterhead]
We have been in	nformed that (hereinafter called "the Applicant") has entered into
Contract No	dated with the Beneficiary, for the execution of
	(hereinafter called "the Contract").
Furthermore, we	e understand that, according to the conditions of the Contract, an advance payment in
	() is to be made against an advance payment guarantee.
to pay the Benef upon receipt by	f the Applicant to issue this guarantee, we as Guarantor, hereby irrevocably undertake ficiary any sum or sums not exceeding in total an amount of()^I us of the Beneficiary's complying demand supported by the Beneficiary's statement, emand itself or in a separate signed document accompanying or identifying the demand, at the Applicant:
the Wor b) has faile	d the advance payment for purposes other than the costs of mobilization in respect of rks; or ed to repay the advance payment in accordance with the Contract conditions, specifying ount which the Applicant has failed to repay.
certificate from	er this guarantee may be presented as from the presentation to the Guarantor of a the Beneficiary's bank stating that the advance payment referred to above has been applicant on its account number at
payment repaid which shall be p the interim payr less provisional	amount of this guarantee shall be progressively reduced by the amount of the advance by the Applicant as specified in copies of interim statements or payment certificates presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of ment certificate indicating that ninety (90) percent of the Accepted Contract Amount, sums, has been certified for payment, or on the day of, 2,² whichever is mently, any demand for payment under this guarantee must be received by us at this pre that date.

Section X:	Contract	Forms	Page	302

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.

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."

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(s)]
Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Retention Money Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary:	[Insert name and Address of Employer]
Date:	[Insert date of issue]
	ARANTEE No.: [Insert guarantee reference number]
	ad address of place of issue, unless indicated in the letterhead]
· ·	
<i>joint venture shall be the nam</i> Contract No.	[insert name of Contractor, which in the case of a ne of the joint venture] (hereinafter called "the Applicant") has entered into [insert reference number of the contract] dated with the ion of [insert name of contract and brief nafter called "the Contract").
Furthermore, we understand moneys up to the limit set fo Over Certificate has been issu certified for payment, payme guaranteed under the Perforn half of the Retention Money	that, according to the conditions of the Contract, the Beneficiary retains orth in the Contract ("the Retention Money"), and that when the Takingued under the Contract and the first half of the Retention Money has been ent of [insert the second half of the Retention Money or if the amount mance Guarantee when the Taking-Over Certificate is issued is less than to the difference between half of the Retention Money and the amount nance Security and, if required, the ES Performance Security] is to be made
to pay the Beneficiary any samount in figures] (demand supported by the Beneficiary are document accompanying or	nt to issue this guarantee, we, as Guarantor, hereby irrevocably undertake sum or sums not exceeding in total an amount of [insert] [amount in words]^I upon receipt by us of the Beneficiary's complying neficiary's statement, whether in the demand itself or in a separate signed identifying the demand, stating that the Applicant is in breach of its ract, without your needing to prove or show grounds for your demand or
certificate from the Beneficia	ntee may be presented as from the presentation to the Guarantor of a arry's bank stating that the second half of the Retention Money as referred the Applicant on its account number at
-	to later than the Day of, 2^2 , and any demand for payment under the office indicated above on or before that date.
guaranteed under the Performance Money, the difference between he and denominated either in the curfreely convertible currency acceptions Insert the same expiry date as a completion date described in GC completion of the Contract, the Erequest must be in writing and me guarantee, the Employer might contract the same contract to the contract of the	rount representing the amount of the second half of the Retention Money or if the amount ce Guarantee when the Taking-Over Certificate is issued is less than half of the Retention half of the Retention Money and the amount guaranteed under the Performance Security prency(ies) of the second half of the Retention Money as specified in the Contract, or in a stable to the Beneficiary. It is set forth in the performance security, representing the date twenty-eight days after the clause 11.9. The Employer should note that in the event of an extension of this date for imployer would need to request an extension of this guarantee from the Guarantor. Such must be made prior to the expiration date established in the guarantee. In preparing this consider adding the following text to the form, at the end of the penultimate paragraph: "The extension of this guarantee for a period not to exceed [six months][one year], in response

Section X: Contract Forms _____ Page | 304

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(s)]
Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.
to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of
the guarantee."

Section X: Contract Forms _____ Page | 305