B I D D I N G D O C U M E N T
for

Procurement of Design, Supply, Installation and commissioning of Extensions of LV single Phase lines and Service Cables for the Last Mile Connectivity Project (EIB)

IPC No: KP1/6E.3/OT/9/22/B02

Project: KENYA POWER DISTRIBUTION LAST MILE CONNECTIVITY PROJECT (EIB)

Employer: THE KENYA POWER & LIGHTING CO. PLC

Country: KENYA

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PART 1 – BIDDING PROCEDURES

Section I. Instructions to Bidders

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Section I. Instructions to Bidders

A. General

1. Scope of Bid

1.1 In connection with the Invitation for Bids specified in the Bid Data Sheet (BDS), the Employer, as specified in the BDS, issues these Bidding Documents for the procurement of Works as specified in Section VII, Works Requirements. The name, identification, and number of lots (contracts) of this International Procurement Competition (IPC) process are specified in the BDS.

1.2 Throughout these Bidding Documents:

(a) The term "in writing" means communicated in written form and delivered against receipt;

(b) Except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and

(c) "Day" means calendar day.

2. Source of Funds

2.1 The Employer **specified in the BDS** has received or has applied for financing (hereinafter called "funds") from the Agence Française de Développement and the European Investment Bank (hereinafter called "EIB") toward the project named **in the BDS**. The Employer intends to apply a portion of the funds to eligible payments under the contract(s) for which these Bidding Documents are issued.

3. Corrupt and Fraudulent Practices

3.1 The EIB requires compliance with its policy regarding corrupt and fraudulent practices as set forth in Section VI, EIB Policy - Corrupt and Fraudulent Practices - Environmental and Social Responsibility.

3.2 In further pursuance of this policy, Bidders shall permit and shall cause its sub-contractors and sub-consultants, to permit the EIB 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 EIB.

4. Eligible Bidders

4.1 A Bidder may be a firm that is a private entity, a State-owned entity - subject to ITB 4.3 - or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an

agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution. **Unless specified in the BDS**, there is no limit on the number of members in a JV.

4.2 The Bank requires that candidates, tenderers, contractors, suppliers or consultants participating in an award procedure or a contract under a Bank-financed project shall not have a conflict of interest.

Conflict of interest occurs when the impartial and objective exercise of the functions of the promoter, or the respect of the principles of competition, non-discrimination or equality of treatment with regard to the procurement procedures of contract, is compromised for reasons involving family, emotional life,, economic interest or any other proved shared interest.

The Bank will not accept candidates or tenderers affected by a conflict of interest in the award procedure to benefit from EIB financing in relation to the contract to be awarded under the concerned procedure.

The assessment of whether or not there is a conflict of interest has to be carried out on a case by case basis, considering the actual risk of conflict based on specific circumstances of the case at stake. The individual or entity in question should be allowed to present supporting evidence which might remove all suspicion of a conflict of interest.

A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this procurement process, if the Bidder:

(a) Directly or indirectly controls, is controlled by or is under common control with another Bidder; or

(b) Receives or has received any direct or indirect subsidy from another Bidder; or

(c) Has the same legal representative as another Bidder; or

(d) Has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or

(e) Participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or

(f) 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

(g) Any of its affiliates has been hired (or is proposed to be hired) by the Employer as Engineer for the Contract implementation; or

(h) Has a close business or family relationship with a professional staff of the Employer (or of the project implementing agency, or of a recipient of a part of the funds) who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the EIB throughout the procurement process and execution of the contract.

4.3 The EIB's eligibility criteria to bid are described in Section V, Eligibility Criteria. In particular, An individual or entity shall be ineligible to be prequalified for, initially selected for, bid for, propose for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, if it has been subject to an exclusion decision as recorded in the databases specified in the BDS.

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

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

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

5. Eligible Materials, Equipment, and Services

5.1 The materials, equipment and services to be supplied under the Contract and financed by the EIB may have their origin in any country subject to the restrictions specified in

Section V, Eligibility Criteria, and all expenditures under the Contract will not contravene such restrictions. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment and services.

B. Contents of Bidding Documents

6. Sections of Bidding Documents

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

PART 1 Bidding Procedures

(a) Section I. Instructions to Bidders (ITB);

(b) Section II. Bid Data Sheet (BDS);

(c) Section III. Evaluation and Qualification Criteria;

(d) Section IV. Bidding Forms;

(e) Section V. Eligibility criteria;

(f) Section VI. EIB Policy - Corrupt and Fraudulent Practices - Social and Environmental Responsibility;

PART 2 Works Requirements

(g) Section VII. Works Requirements;

PART 3 Conditions of Contract and Contract Forms

(h) Section VIII. General Conditions (GC);

(i) Section IX. Particular Conditions (PC);

(j) Section X. Contract Forms.

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

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

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

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

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

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

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

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

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

7.6 Minutes of the pre-bid meeting, if applicable, including the text of the questions asked by Bidders, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Documents in accordance with ITB 6.3. Any modification to the Bidding Documents that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to ITB 8 and not through the minutes of the pre-bid meeting. Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

8. Amendment of Bidding Documents

8.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Documents by issuing amendments.

8.2 Any amendment issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Documents from the Employer in accordance with ITB 6.3. The Employer shall also promptly publish the amendment on the Employer's web page in accordance with ITB 7.1.

8.3 To give Bidders reasonable time in which to take an amendment into account in preparing their bids, the Employer may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 22.2

C. Preparation of Bids

9. Cost of Bidding

9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

10. Language of Bid

10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language **specified in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.

11. Documents Comprising the Bid

11.1 The Bid shall comprise the following:

(a) Letter of Bid and the Bidding Forms in accordance with ITB 12;

(b) Completed schedules as required, including Price Schedules, in accordance with ITB 12 and 14 and as indicated in the BDS;

(c) Bid Security or Bid-Securing Declaration, in accordance with ITB 19.1;

(d) Alternative bids, if permissible in accordance with ITB 13;

(e) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2;

(f) Covenant of Integrity, Environmental and Social Covenant, duly signed, in accordance with ITB 12;

(g) Documentary evidence in accordance with ITB 17 establishing the Bidder's continued qualified status or, if post-qualification applies, as specified in accordance with ITB 4.5, the Bidder's qualifications to perform the contract if its Bid is accepted;

(h) Technical Proposal in accordance with ITB 16;

(i) Any other document **required in the BDS**.

11.2 In addition to the requirements under ITB 11.1, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.

11.3 The Bidder shall furnish information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

12. Letter of Bid, Covenant of Integrity, Environmental & Social Covenant Bidding Forms and Schedules

12.1 The Letter of Bid, the Covenant of Integrity, Environmental & Social Covenant, the Bidding Forms and Schedules, including the Bill of Quantities for unit price contracts or the Schedule of Prices in case of lump sum contracts, shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The Letter of Bid, the Covenant of Integrity and the Environmental & Social Covenant must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.4. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

13.1 **Unless otherwise specified in the BDS**, alternative bids shall not 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 evaluation shall be included 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 Documents must first price the Employer's design as described in the Bidding Documents 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 lowest evaluated Bidder conforming to the Employer's design of the Bidding Documents 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, and such parts will be identified in Section VII, Works Requirements. The methods for their evaluation shall be described in Section III, Evaluation and Qualification Criteria.

14. Bid Prices and Discounts

14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Schedules, shall conform to the requirements specified below.

14.2 The Bidder shall submit a bid for the whole of the Works described in ITB 1.1, by filling in price(s) for all items of the Works, as identified in Section IV, Bidding Forms. In case of admeasurement contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Employer. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Bid, and provided that the Bid is determined substantially responsive notwithstanding this omission, the highest price of the item quoted by substantially responsive bidders will be added to the bid price and the equivalent total cost of the bid so determined will be used for price comparison.

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14.3 The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered.

14.4 The Bidder shall quote any discounts and the methodology for their application in the Letter of Bid.

14.5 **Unless otherwise specified in the BDS** and the Contract, the rate(s) and price(s) quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. In such a case, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Employer may require the Bidder to justify its proposed indices and weightings.

14.6 If so specified in ITB 1.1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Bidders wishing to offer discounts for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4, provided the bids for all lots (contracts) are opened at the same time.

14.7 **Unless otherwise specified in the BDS**, all duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.

15. Currencies of Bid and Payment

15.1 The currency(ies) of the bid and the currency(ies) of payments shall be **as specified in the BDS**.

15.2 Bidders may be required by the Employer to justify, to the Employer's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the prices shown in the Schedule of Adjustment Data in the Appendix to Bid are reasonable, in which case a detailed breakdown of the foreign currency requirements shall be provided by Bidders.

16. Documents Comprising the Technical Proposal

16.1 The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, Schedules and any other information as stipulated in Section IV, Bidding Forms, in sufficient detail to

demonstrate the adequacy of the Bidder's proposal to meet the Work requirements and the completion time.

17. Documents Establishing the Qualifications of the Bidder

17.1 In accordance with Section III, Evaluation and Qualification Criteria, to establish that the Bidder continues to meet the criteria used at the time of prequalification, the Bidder shall provide in the corresponding information sheets included in Section IV, Bidding Forms, updated information on any assessed aspect that changed from that time, or if post-qualification applies as specified in ITB 4.5, the Bidder shall provide the information requested in the corresponding information sheets included in Section IV, Bidding Forms.

17.2 If a margin of preference applies as specified in accordance with ITB 33.1, domestic Bidders, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITB 33.1.

17.3 Any change in the structure or formation of a Bidder after being prequalified and invited to Bid (including, in the case of a JV, any change in the structure or formation of any member thereto) shall be subject to the written approval of the Employer prior to the deadline for submission of Bids. Such approval shall be denied if (i) as a consequence of the change, the Bidder no longer substantially meets the qualification criteria set forth in Section III, Evaluation and Qualification Criteria; or (ii) in the opinion of the Employer, the change may result in a substantial reduction in competition. Any such change should be submitted to the Employer not later than fourteen (14) days after the date of the Invitation for Bids.

18. Period of Validity of Bids

18.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Employer in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.

18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Employer may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITB 19, it shall also be extended for twenty-eight (28) days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its bid security. A Bidder

granting the request shall not be required or permitted to modify its bid, except as provided in ITB 18.3.

18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be determined as follows:

(a) In the case of fixed price contracts, the Contract price shall be the bid price adjusted by the factor **specified in the BDS**;

(b) In the case of adjustable price contracts, no adjustment shall be made;

(c) In any case, bid evaluation shall be based on the bid price without taking into consideration the applicable correction from those indicated above.

19. Bid Security

19.1 The Bidder shall furnish as part of its bid a Bid Security **as specified in the BDS**, in original form and, in the case of a Bid Security, in the amount and currency **specified in the BDS**.

19.3 If a Bid Security is specified pursuant to ITB 19.1, the Bid Security shall be a demand guarantee in any of the following forms at the Bidder's option:

(a) An unconditional guarantee issued by a bank or financial institution (such as an insurance, bonding or surety company);

(b) An irrevocable letter of credit;

(c) A cashier's or certified check; or

(d) Another security **specified in the BDS**;

from a reputable source from an eligible country as specified in Section V, Eligibility Criteria. If the unconditional guarantee is issued by a financial institution located outside the Employer's Country, the issuing financial institution shall have a correspondent financial institution located in the Employer's Country to make it enforceable. In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Employer prior to bid submission. The Bid Security shall be valid for twenty-eight (28) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.

19.4 Any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Employer as non-responsive.

19.5 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the Contract and furnishing the Performance Security pursuant to ITB 42.

19.6 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required Performance Security.

19.7 The Bid Security may be forfeited:

(a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, or any extension thereto provided by the Bidder; or

(b) If the successful Bidder fails to:

(i) Sign the Contract in accordance with ITB 41; or

(ii) Furnish a Performance Security in accordance with ITB 42.

19.8 The Bid Security 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 shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.

19.9 If a Bid Security is **not required in the BDS** pursuant to ITB 19.1, and

(a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereto provided by the Bidder, or

(b) If the successful Bidder fails to sign the Contract in accordance with ITB 41; or furnish a Performance Security in accordance with ITB 42;

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

20. Format and Signing of Bid

20.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11 and clearly mark it "ORIGINAL." Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE." In addition, the Bidder shall submit copies of the bid, in the number **specified in the BDS** and clearly mark them

"COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

20.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation **as specified in the BDS** and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or amendments have been made shall be signed or initialed by the person signing the bid.

20.3 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, then the Bid shall be signed by every member of the proposed JV.

20.4 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

D. Submission and Opening of Bids

21. Sealing and Marking of Bids

21.1 The Bidder shall enclose the original and all copies of the bid, including alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", "ALTERNATIVE" and "COPY." These envelopes containing the original and the copies shall then be enclosed in one single envelope.

21.2 The inner and outer envelopes shall:

(a) Bear the name and address of the Bidder;

(b) Be addressed to the Employer in accordance with ITB 22.1;

(c) Bear the specific identification of this bidding process specified in the 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 Documents in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

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

24. Withdrawal, Substitution, and Modification of Bids

24.1 A Bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 20.2. The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:

(a) Prepared and submitted in accordance with ITB 20 and ITB 21 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL", "SUBSTITUTION", "MODIFICATION"; and

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

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

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

25. Bid Opening

25.1 Except in the cases specified in ITB 23 and 24, the Employer shall publicly open and read out in accordance

with ITB 25 all bids received by the deadline (regardless of the number of bids received), at the date, time and place **specified in the BDS**, in public and in the presence of Bidders` designated representatives and anyone who choose to attend. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB 22.1, shall be **as specified in the BDS.**

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

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

25.4 The Employer shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot (contract) if applicable, including any discounts and alternative bids; and the presence or absence of a bid security or bid-

securing declaration, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

26. Confidentiality

26.1 Information relating to the examination, evaluation, and comparison of the bids, and qualification of the Bidders and recommendation of contract award shall not be disclosed to Bidders or any other persons not officially concerned with the bidding process until information on Contract award is communicated to all Bidders in accordance with ITB 40.

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

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

27. Clarification of Bids

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

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

28. Deviations, Reservations, and Omissions

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

(a) "Deviation" is a departure from the requirements specified in the Bidding Documents;

(b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and

(c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.

29. Determination of Responsiveness

29.1 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB11.

29.2 A substantially responsive bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

(a) If accepted, would:

(i) Affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or

(ii) Limit in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the Bidder's obligations under the proposed Contract; or

(b) If rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.

29.3 The Employer shall examine the technical aspects of the bid submitted in accordance with ITB 16, in particular, to confirm that all requirements of Section VII, Works Requirements have been met without any material deviation, reservation or omission.

29.4 If a bid is not substantially responsive to the requirements of the Bidding Documents, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

30. Nonmaterial Nonconformities

30.1 Provided that a bid is substantially responsive, the Employer may waive any nonmaterial 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 Only for admeasurement contracts and 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 non-conforming item or component.

31. Correction of Arithmetical Errors

31.1 Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:

(a) Only for admeasurement contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;

(b) Only for admeasurement contracts, if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

(c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless, only for admeasurement contracts, the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

31.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 31.1 shall result in the rejection of the Bid.

32. Conversion to Single Currency

32.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency **as specified in the BDS**.

33. Margin of Preference

33.1 **Unless otherwise specified in the BDS**, a margin of preference for domestic Bidders shall not apply.

34. Subcontractors

34.1 Unless otherwise stated in the BDS, the Employer does not intend to execute any specific elements of the Works by sub-contractors selected in advance by the Employer (nominated sub-contractors).

34.2 A "specialized sub-contractor" is a sub-contractor hired for specialized work as defined by the Employer in Section III 4.2 Experience. If no specialized work is specified by the Employer as such, sub-contractors experience shall not be considered for bids evaluation.

34.3 In case of Prequalification, the Bidder's Bid shall name the same specialized subcontractor as submitted in the prequalification application and approved by the Employer, or may name another specialized subcontractor meeting the requirements specified in the prequalification phase.

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

35. Evaluation of Bids

35.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.

35.2 To evaluate a bid, the Employer shall consider the following:

(a) The bid price, excluding Provisional Sums unless priced competitively and the provision, if any, for contingencies in the Schedules, but including Daywork items, where priced competitively;

(b) Price adjustment for correction of arithmetic errors in accordance with ITB 31.1;

(c) Price adjustment due to missing items, missing rates, or discounts offered in accordance with ITB 14.2 and 14.4;

(d) Price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 30.3;

(e) Converting the amount resulting from applying (a) to (d) above, if relevant, to a single currency in accordance with ITB 32;

(f) The additional evaluation factors as specified in Section III, Evaluation and Qualification Criteria.

35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.

35.4 If these Bidding Documents allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Letter of Bid, is specified in Section III, Evaluation and Qualification Criteria.

35.5 If the bid, which results in the lowest Evaluated Bid Price, is significantly lower than the Employer's estimate, the Employer shall require the Bidder to produce detailed price analyses for any or all items of the Schedules, to demonstrate the internal consistency of those prices with the construction methods, resources and schedule proposed. Notwithstanding the provisions of ITB 14.2 which shall not be applicable, if one or several inconsistencies are evidenced, the bid shall be declared non-compliant and rejected. If the bid is seriously unbalanced or front loaded in the opinion of the Employer and after evaluation of the price analyses, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

35.6 Only the qualifications of the Bidder shall be considered. In particular, the qualifications of a parent or other affiliated company that is not party to the Bidder under a JV in accordance with ITB 4.1 shall not be considered.

35.7 In case of multiple contracts, Bidders should indicate in their Bids the individual contracts in which they are interested. The Employer shall qualify each Bidder for the maximum combination of contracts for which the Bidder has thereby indicated its interest and for which the Bidder meets the appropriate aggregate requirements. The Qualification Criteria and Requirements are mentioned in Section III, Evaluation and Qualification Criteria.

36. Comparison of Bids

36.1 The Employer shall compare the evaluated prices of all substantially responsive bids established in accordance with ITB 35.2 to determine the lowest evaluated bid.

37. Qualification of the Bidder

37.1 Any change in the structure or formation of a Bidder after being prequalified and invited to bid (including, in the case of a JV, any change in the structure or formation of any member thereto) shall be subject to the written approval of the Employer. Such approval shall be denied if (i) as a consequence of the change, the Bidder no longer substantially meets the prequalification criteria; or (ii) in the opinion of the Employer, the change may result in a substantial reduction in competition. Any such change should be submitted to the Employer not later than fourteen (14) days after the date of the Invitation for Bids.

37.2 The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid either continues to meet (if prequalification applies) or meets (if postqualification applies) the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

37.3 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17.1.

37.4 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Employer shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's qualifications to perform satisfactorily.

38. Employer's Right toReject All Bids

38.1 The Employer reserves the right to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

F. Award of Contract

39. Award Criteria

39.1 Subject to ITB 38.1, the Employer shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

40. Notification of Award

40.1 Prior to the expiration of the period of bid validity, the Employer shall notify the successful Bidder, in writing, that its bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the "Letter of Acceptance") shall specify the sum that the Employer will pay the Contractor in consideration of the execution and completion of the Works and the requirement for the Contractor to remedy any defects therein (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price"). At the same time, the Employer shall also notify all other Bidders of the results of the bidding.

44.1

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

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

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

Signing of Contract

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

41.2 Within twenty-eight (28) days but not earlier than fourteen (14) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.

Performance Security

42.1 Within twenty-eight (28) days but not earlier than fourteen (14) days of the receipt of notification of award from the Employer, the successful Bidder shall furnish the performance security in accordance with the General Conditions of Contract, subject to ITB 35.5, using for that purpose the Performance Security Form included in Section X, Contract Forms, or another form acceptable to the Employer. If the performance security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Employer. A foreign institution providing a bond shall have a correspondent financial institution located in the Employer's Country.

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

Section II. Bid Data Sheet

A. Introduction	
ITB 1.1	The number of the Invitation for Bids is: **KP1/6E.3/OT/9/22/B02**
ITB 1.1	The Employer is: **KENYA POWER & LIGHTING COMPANY LTD**
ITB 1.1	The name of the IPC is: **Procurement of Design, Supply, Installation and commissioning of Extensions of LV single Phase lines and Service Cables for the Last Mile Connectivity Project (EIB)** The identification number of the IPC is: **KP1/6E.3/OT/9/22/B02** The number and identification of lots (contracts) comprising this IPC is: **KP1/6E.3/OT/9/22/B02 LOT 1 (***Central Rift)* – Design, Supply, Installation and commissioning of LV single Phase lines and Service Cables. **(**This includes the following counties: Nakuru, Kericho) **KP1/6E.3/OT/9/22/B02 LOT 2 (***North Rift, Western)* - Design, Supply, Installation and commissioning of LV single Phase lines and Service Cables. **(**This includes the following counties: Nandi, Uasin Gishu, Trans Nzoia, Bungoma, West Pokot) **KP1/6E.3/OT/9/22/B02 LOT 3 (***Western)* - Design, Supply, Installation and commissioning of LV single Phase lines and Service Cables. **(**This includes the following counties: Kisumu, Siaya) **KP1/6E.3/OT/9/22/B02 LOT 4** *(South Nyanza)* - Design, Supply, Installation and commissioning of LV single Phase lines and Service Cables. **(**This includes the following counties: Migori, Homabay, Kisii) **KP1/6E.3/OT/9/22/B02 LOT 5** *(Western)* - Design, Supply, Installation and commissioning of LV single Phase lines and Service Cables. **(**This includes the following counties:Vihiga, Busia, Kakamega) **KP1/6E.3/OT/9/22/B02 LOT 6** *(Central Rift, South Nyanza)* - Design, Supply, Installation and commissioning of LV single Phase lines and Service Cables. **(**This includes the following counties:Narok, Bomet, Nyamira) **KP1/6E.3/OT/9/22/B02 LOT 7** *(Mt. Kenya/Coast/Central Rift)* - Design, Supply, Installation and commissioning of LV single Phase lines and Service Cables. **(**This includes the following counties: Nyandarua, Laikipia, Nyeri, Meru, Tharaka Nithi)

	KP1/6E.3/OT/9/22/B02 LOT 8 ***(****North Eatern/Mt. Kenya****)*** - Design, Supply, Installation and commissioning of LV single Phase lines and Service Cables. **(**This includes the following counties: Kitui, Embu, Kirinyaga, Murang'a) **KP1/6E.3/OT/9/22/B02 LOT 9** ***(****Coast/Nairobi South****)*** - Design, Supply, Installation and commissioning of LV single Phase lines and Service Cables. **(**This includes the following counties: Kajiado, Makueni, Kilifi, and Kwale.) Bidders have the option to Bid for any one or more lots. However, the maximum number of lots a bidder may be awarded shall be two (2) lots. For Multiple Contracts, the criteria for qualification are the cumulative minimum requirements for respective lots under items 3.1, 3.2, 4.2 (a) and 4.2 (b) of the evaluation and qualification criteria The bidders shall note that ***Each lot shall constitute one contract*** ***NB: The general geographical locations of the lots are detailed under Section VII of this bidding document (Work Requirements) complete with details relating to the scope.***
ITB 1.1	The tendering procedure will be carried out in line with EIB's Guide to Procurement available on the Bank's website: https://www.eib.org/en/publications/guide-to-procurement.htm.
ITB 2.1	The name of the Project is: **KENYA POWER DISTRIBUTION LAST MILE CONNECTIVITY PROJECT (EIB)**
ITB 4.1	Maximum number of members in the JV shall be: **Not limited**
ITB 4.2 (e)	Conflict of interest shall refer to EIB's definition on conflict of interest as per section 1.5 of EIB's Guide to Procurement. Assessment of any potential conflict of interest will be done as per the EIB Guide to Procurement. A Bidder may be considered to have a conflict of interest for the purpose of this procurement process, if the Bidder: Participates in more than one bid in the **same lot**. Participation by a Bidder in more than one Bid in the **same lot** will result in the disqualification of all Bids in which such Bidder is involved in that particular lot. However, this does not limit the inclusion of the same subcontractor in more than one bid
ITB 4.3	Firms originating from all countries of the world are eligible to participate in this tender unless they have been subject to an exclusion decision as recorded in the databases specified below. A list of debarred firms and individuals is available on the websites:

	http://www.eib.org/about/accountability/anti-fraud/exclusion/index.htm *https://eeas.europa.eu/headquarters/headquarters-homepage/8442/consolidated-list-sanctions_en* https://www.un.org/sc/suborg/en/sanctions/un-sc-consolidated-list Pursuant to its Sanctions Policy, the Bank shall not provide or otherwise make funds available, directly or indirectly, to or for the benefit of an individual or entity that is subject to financial sanctions imposed by the EU, either autonomously or pursuant to the financial sanctions decided by the United Nations Security Council on the basis of article 41 of the UN Charter. Tenderers should alert KPLC in writing, with a copy to the European Investment Bank to procurementcomplaints@eib.org, in case they should consider that certain clauses or technical specifications of the TDs might limit international competition or introduce an unfair advantage to some tenderers.
ITB 4.4	Bid-Securing Declaration ***is not applicable.***
ITB 4.5	This Bidding Process ***is not*** subject to prequalification.
B. Bidding Documents	
ITB 7.1	For **clarification purposes** only, the Employer's address is: Attention: **Contract Project Manager (EIB)** **The Kenya Power and Lighting Company Limited,** **Stima Investment Building II, 7th Floor** **Kolobot Road, Parklands** **P.O Box 30099 - 00100** **Nairobi, Kenya** Telephone: +254711031211 Electronic mail address: **Kyaloj@kplc.co.ke** and a copy to **DMuthangya@kplc.co.ke**; **SMucheke@kplc.co.ke**; **VMagana@kplc.co.ke**
ITB 7.4	A Pre-Bid meeting ***shall*** take place at the following date, time and place: Date: **31st May, 2023** Time: **1000hrs East Africa Time** Place: **The Auditorium, Stima Plaza, Kenya Power & Lighting Company Ltd, Kolobot Rd, Parklands, Nairobi - Kenya** A site visit **will be** organized by the Employer in sample sites within Kajiado and Muranga Counties on **1st and 2nd June, 2023**.
C. Preparation of Bids	
ITB 9. Cost of Bidding	Bid document detailing the requirements shall be obtained by downloading from the KPLC website (www.kplc.co.ke). No Bid documents will be issued from any KPLC office.
ITB 10.1	The language of the bid is: **English**

<table>
<tr><td></td><td>All correspondence exchange shall be in the English language. Language for translation of supporting documents and printed literature is English.</td></tr>
<tr><td>ITB 11</td><td>11.1 (b) The following schedules shall be submitted with the Bid:
- Price Schedules
- Project Time Schedule
11.1 (f). The bidder shall submit with the bid its Environmental, Social, and Health & Safety (ESH&S) Management Plan for evaluation. The plan shall ensure mandatory compliance with EIB's environmental and social safeguards outlined in the bank’s handbook that can be found in their website:

https://www.eib.org/attachments/publications/eib_environmental_and_social_standards_en.pdf

Note: Environmental and Social Management Framework (ESMF) is included in this bidding document under Section VII for compliance</td></tr>
<tr><td>ITB 11.1 (i)</td><td>The Bidder shall submit the following additional documents (for major items to be supplied) in its bid:
• Manufacturer’s authorizations in case the bidder is not a manufacturer
• Manufacturer’s ISO 9001:2015 or higher quality assurance certificate. A copy of such certificate shall be submitted with the bid.
• Guaranteed Technical Particulars (GTPs)/ characteristics duly completed and signed by the bidder per Volume II of the bidding document.
• Type Tests certificates from accredited Laboratories as required in the Technical Specifications
• The accreditation certificate for the testing laboratory
• Bidders shall provide additional information such as brochures/catalogues/drawings describing in detail the proposed items.
• The Manufacturer’s Declaration of Conformity to reference standards.
• Documentary Evidence indicating manufacturers Supplies record as follows;
(a) List of manufacturer’s customer sales records submitted to support the offer
(b) Details of the supply contracts:
i) The Client’s name, address and contact person as well as its location.
ii) Copies of contract award letters, and Purchase Orders indicating quantity supplied under the contract and the contract amount
• Manufacturer’s warranty as stipulated in Section III – Evaluation Criteria.
The following are the major items;
<table><tr><td>No.</td><td>Description</td></tr><tr><td>1.</td><td>Conductors (50 Sqmm PVC Insulated AA and 50 Sqmm bare AA)</td></tr><tr><td>2.</td><td>Service Cables (10 Sqmm Concentric Al)</td></tr><tr><td>3.</td><td>Poles (Wooden and Concrete)</td></tr><tr><td>4.</td><td>LV Insulators</td></tr><tr><td>5.</td><td>Meter Boxes</td></tr></table></td></tr>
</table>

	6. Ready boards The bidder shall also submit a valid ISO certificate copy. If bidding as a Joint Venture (JV), valid ISO certificate copies of all the partners shall be submitted.
ITB 11.2	The joint venture agreement shall have provisions detailing how the contract shall be implemented to completion in the event one of the partners becomes ineligible after the contract has been signed and during the contract implementation period, in cases where the partner that is still eligible has the capacity to execute the remaining scope of the contract.
ITB 12.1	In the Covenant of Integrity, the tenderer (including all Joint Venture/consortium members) is requested to self-declare all sanctions and/or exclusions (including any similar decisions having the effect of imposing conditions on the tenderer or its subsidiaries or to exclude the said tenderer or its subsidiaries, such as temporary suspension, conditional non-exclusion, etc.) imposed by the European institutions or any multilateral development banks (including the World Bank Group, the African Development Bank, the Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank or Inter-American Development Bank), regardless of the date of issue and the expiration or not of such decisions and of the current status of any sanction and/or exclusion. In this regard, any omission or misrepresentation, made knowingly or recklessly, may be considered as fraud under the EIB Anti-Fraud Policy. Therefore, the Employer reserves the right to reject any offer presenting an inaccurate or incomplete Covenant of Integrity, and may cause the rejection of the offer for prohibited conduct. Modification of the Covenant of Integrity text is not allowed. The tender (including all Joint Venture members/Consortium members) shall submit a dully signed Environmental & Social Covenant.
ITB 13.1	Alternative bids ***Shall Not*** be permitted under ITB 13.2 / ITB 13.3 / ITB 13.4
ITB 13.3 Unsolicited alternative bids	**N/A**
ITB 13.4 Technical alternatives designed by the Employer	**N/A**
ITB 14.1	Conditional discounts ***shall not*** be allowed.

ITB 14.2	Additional Text "Equipment and specific goods manufactured and supplied from abroad for the purpose of the contract will be quoted in CIP, in accordance with INCOTERMS 2010"
ITB 14.5	The prices quoted by the Bidder shall be: ***Fixed***
ITB 14.7	The Bidder shall identify in the Bid Price as a separate amount the taxes, duties and fees payable under the Contract. Taxes, duties and fees exemptions, to which payments under the Contract are entitled, are specified in clause 14.1 (b) of the Particular Conditions of Contract. For goods to be supplied from abroad, the bidder shall be responsible for clearance of the equipment. However, KPLC shall seek exemption for the cost of the following: 1. Custom Duties 2. Import Declaration Fees 3. Value Added Tax (VAT) 4. Railway Development Levy (RDL) The bidders shall include in their bid all clearing and forwarding charges/agency fees for Plant and Mandatory Spare Parts Supplied from Abroad The employer shall seek VAT exemption for Plant and Mandatory Spare Parts Supplied from Within the Employer's Country.
ITB 15.1	The unit rates and prices shall be quoted by the Bidder in the Schedules 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 Shilling (Ksh)**, which is 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 Euros (€).** Named place of destination in accordance with INCOTERMS 2020 is: (i) Lot 1 – CIP…...(All taxes to be quoted separately) (ii) Lot 2 – CIP…...(All taxes to be quoted separately) (iii) Lot 3 – CIP…..(All taxes to be quoted separately) (iv) Lot 4 – CIP….. (All taxes to be quoted separately) (iv) Lot 5 – CIP….. (All taxes to be quoted separately) (iv) Lot 6 – CIP….. (All taxes to be quoted separately) (iv) Lot 7 – CIP….. (All taxes to be quoted separately) (iv) Lot 8 – CIP….. (All taxes to be quoted separately) (iv) Lot 9 – CIP….. (All taxes to be quoted separately)
ITB 18.1	The bid validity period shall be ***180*** days.
ITB 18.3 (a)	The bid price shall be adjusted as follows - ***N/A***
ITB 19.1	A *Bid Security* ***shall*** be required.

<table>
<tr><td>Bid Security</td><td>A Bid-Securing Declaration shall not be required.
The Bidder shall furnish, as part of its Bid, a Bid security for the amount specified below (based on associated Lot). The Original Bid Security, in a clearly labelled envelop, shall be deposited in the Tender Security Box on KPLC Supply Chain – (Procurement Department,) on or before the opening date and time and receipt acknowledged by KPLC evidenced by a stamped copy.
The Bidder shall furnish a bid security in the form of a Bank Guarantee Only; the amount and currency of the bid security shall either be in Euros or Ksh as tabulated below:
<table>
<tr><th>Lot No</th><th>Minimum Bid Security in (EUR)</th><th>Minimum Bid Security in (KSH).</th></tr>
<tr><td>KP1/6E.3/OT/9/22/B02 LOT 1</td><td>106,000.00</td><td>15,965,500.00</td></tr>
<tr><td>KP1/6E.3/OT/9/22/B02 LOT 2</td><td>147,400.00</td><td>22,205,000.00</td></tr>
<tr><td>KP1/6E.3/OT/9/22/B02 LOT 3</td><td>105,400.00</td><td>15,874,000.00</td></tr>
<tr><td>KP1/6E.3/OT/9/22/B02 LOT 4</td><td>90,100.00</td><td>13,580,000.00</td></tr>
<tr><td>KP1/6E.3/OT/9/22/B02 LOT 5</td><td>96,200.00</td><td>14,500,000.00</td></tr>
<tr><td>KP1/6E.3/OT/9/22/B02 LOT 6</td><td>94,400.00</td><td>14,222,000.00</td></tr>
<tr><td>KP1/6E.3/OT/9/22/B02 LOT 7</td><td>130,300.00</td><td>19,635,000.00</td></tr>
<tr><td>KP1/6E.3/OT/9/22/B02 LOT 8</td><td>101,100.00</td><td>15,232,000.00</td></tr>
<tr><td>KP1/6E.3/OT/9/22/B02 LOT 9</td><td>124,900.00</td><td>18,810,000.00</td></tr>
</table></td></tr>
<tr><td>ITB 19.3 (a)</td><td>The bid Security: The Bid Security shall be issued by a reputable licensed Bank. If the Bid Security is issued by a Bank licensed outside of the Employer’s Country, the issuing Bank will enable the Employer to authenticate the validity of the security in question. In case the Employer does not receive confirmation from the issuing bank on the authenticity of the Bid Security and its ability to enforce the security within the requested period, the Employer will have the right to reject the bid.</td></tr>
<tr><td>ITB 19.3 (d)</td><td>Other types of acceptable securities: None</td></tr>
<tr><td>ITB 19.9</td><td>N/A</td></tr>
<tr><td>ITB 20.1</td><td>Not Applicable</td></tr>
<tr><td>ITB 20.2</td><td>The written confirmation of authorization to sign on behalf of the Bidder shall consist of:
A Power of Attorney established in the name of the signatory of the bid and his sample signature appended on it.</td></tr>
</table>

D. Submission and Opening of Bids	
ITB 22.1	For bid submission purposes only, the employer's address is: Attention: The General Manager, Supply Chain & Logistics The Kenya Power and Lighting Company PLC Stima Plaza, Kolobot Road Floor: 3rd Floor, City: Nairobi ZIP/Postal Code: P.O. Box 30099 - 00100 Country: Kenya. The deadline for bid submission is: Date: **18.07.2023** Time: **10:00 A:M** Bidders ***shall not*** have the option of submitting their bids electronically
ITB 25.1	The bid opening shall take place at: Address: Street Address: **Stima Plaza, Kolobot Road, Parklands** Floor/Room number: ***Auditorium*** City: ***Nairobi]*** Country: Kenya Date: **18.07.2023** Time: **10:30 A:M**
E. Evaluation, and Comparison of Bids	
ITB 32.1	The currency that shall be used for bid evaluation and comparison purposes to convert all bid price(s) expressed in various currencies into a single currency is: ***Kenya Shillings (Ksh)*** The source of exchange rate (Selling) shall be: **CENTRAL BANK OF KENYA** The date for the exchange rate shall be **Tender Closing Date 18.07.2023** The Employer will convert the amounts in various currencies in which the Bid Price, corrected pursuant to Clause 31, 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. For equipment manufactured and imported for the purpose of the contract, the Employer will exclude and not take into account customs duties and other import taxes levied on the imported equipment, sales and other similar taxes, which will be payable on the equipment if the contract is awarded to the Bidder.
ITB 33.1	A margin of preference ***shall not*** apply.
ITB 34.1	The Employer ***does not intend*** to execute certain specific parts of the Works by sub-contractors selected in advance (nominated subcontractors).
ITB 39.1	Subject to ITB 38.1 and ITB 39.1, bidders may bid for any one lot or any number of lots. However, the maximum number of lots a bidder may be awarded shall be two (2) lots. The criteria to be used in arriving at two (2) lots, for any bidder evaluated as the lowest

	in more than 2 lots, shall be the award that gives the employer the lowest total cost across the nine lots. In the event the successful bidder is not able to sign a contract with the employer the award shall be annulled and the employer may award to the next lowest evaluated bidder of that **particular Lot** whose offer is substantially responsive and is determined by the employer to be qualified to perform the contract satisfactorily based on the above award criteria.
39.1.2 **Standstill period**	The Contract shall not be awarded earlier than the expiry of the Standstill Period. The Standstill Period shall be Fourteen (14) calendar Days. The Standstill Period commences on the date of Notification of intention to Award the Contract and regret letters to the unsuccessful bidders. 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.
	If a Bidder wishes to make a Procurement-related Complaint or a request for debriefing, the Bidder should submit its complaint following these procedures, in writing to: **For the attention**: The General Manager, Supply Chain Kenya Power and Lighting Company PLC P.O. Box 30099 – 00100 Nairobi **Email address: JKNgeno@kplc.co.ke** In the event that the bidder is not satisfied by the respone on their comliants they could channel the same to the Public Procurement Administrative Review Board (PPARB).
ITB 40.1 Notification of Award	The Contract Award Notice shall be published on the Employer's website with free access if available, or in the official gazette. The Employer shall also publish the contract award notice in the Official Journal of the European Union (OJEU).
ITB 40.2	Until a formal contract is prepared and executed, the letter of acceptance shall constitute a binding Contract.
ITB 40.3	The Employer shall promptly respond in writing to any unsuccessful Bidder who, after notification of the intention to award in accordance with ITB 40.1, requests in writing the grounds on which its bid was not selected.
ITB 42.1 Performance Security	The Performance Guarantee may be issued by a commercial Bank licensed in the Employer's country. If the Bank issuing the performance guarantee is located outside of the Employer's country, it shall have a corresponding Bank located in the employer's country to make it enforceable, or alternatively, the performance guarantee should be counter-guaranteed by a Bank licensed in the Employer's country to make it enforceable.

Section III. Evaluation and Qualification Criteria

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

Wherever a Bidder is required to state a monetary amount, Bidders should indicate the EUR equivalent using the rate of exchange determined as follows:

(a) For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year;

(b) 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.

1. Evaluation

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

1.1 Assessment of adequacy of Technical Proposal with Requirements

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

The bidder shall demonstrate as part of the requirements ITB 16.1 the design, Installation and Commissioning capabilities through detailed presentation of firm's design, engineering, installation and Commissioning methodology. This shall include method statements, Installation and erection in medium voltage and low voltage line projects, Quality Control, Environmental and Social risks management, Health and Safety Management.

As part of the requirements of section IV (site organization) the bidder shall submit a detailed presentation that shall encompass the following;

- A general presentation of the local works, citing expected challenges and intended solutions.
- The structure of the local outfit for execution of works.
- The project organization structure.
- Detailed delivery schedule

The bidders shall provide Technical Schedules (Guaranteed Technical Particulars for Major Items) with detailed information of offered materials and equipment, in which all required information, should be filled completely as specified in the Tender documents (ITB 11.1(i))

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.

The Bidders shall include documentary evidence of the bidder's qualifications, comprehensive enough to allow the Employer to carry out post-qualification as described below.

1.2 **Multiple Contracts**, will be evaluated as follows:

Bidders may bid for any one lot or any number of lots. However, the maximum number of lots a bidder may be awarded shall be two (2) lots. The criteria to be used in arriving at two (2) lots, for any bidder evaluated as the lowest in more than 1 lot, shall be the award that gives the employer the lowest total cost across the nine lots.

1.3 Alternative **Completion Times**, not permitted.

1.4 **Technical alternatives**, not permitted.

1.5 **Personnel**

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

No.	Position	Number of Personnel	Total Work Experience (years)	In Similar Works Experience (years)
1.	Resident Project Manager	1	15	10
2.	Construction Manager	1	10	8
3.	Safety, Health & Environment Manager	1	7	5
4.	Design Engineer – Electrical	1	7	5
5.	Construction - Engineers	2	7	5
6.	Construction Technicians	8	5	3
7.	Health & Safety Officer	1	5	3
8.	Environmental and Social Officer	1	5	3

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

1.6 Equipment

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

No.	Equipment Type and Characteristics	Minimum Number required
1.	Excavation Machines	At least two per county
2.	Lifting equipment – For the size of poles described in the scope	At least two per county
3.	Line construction Tools *(List and provide details in the relevant form in section iv)*	Bidder to provide list
4.	Design Tools	Bidder to provide list

No.	Equipment Type and Characteristics	Minimum Number required
5.	Earth Resistance Measuring Equipment (Megger)	One per County
6.	Earth - fault Loop Impedance Tester	One per technician
7.	Appropriate hand-held digital equipment with capacity to pick coordinates for meter validation (e.g GPS)	One per technician
8.	Compressor and jack hammer	One per County

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

2. **Domestic Preference,** not permitted.

3. Qualification

3.1 Subcontractors

The general experience and financial resources of the sub-contractors **shall not** be added to those of the Bidder for purposes of qualification of the Bidder.

3.3 Qualification if no prequalification has taken place:

ESH&S

The bidder shall submit with the bid its Environmental, Social, Health & Safety (ESH&S) Management Plan for evaluation.

Qualification Criteria

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
1. Eligibility							
1.1	**Nationality**	Nationality in accordance with ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.2	**Conflict of Interest**	No conflicts of interest in accordance with ITB 4.2	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.3	**EIB Eligibility**	Not being ineligible to the EIB financing, as described in ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Covenant of Integrity (appendix to Letter of Bid) – must be submitted at the time of bid submission, signed and sealed, failure to which the bid shall be treated as non-responsive.
1.4	**State-Owned Entity**	Meet conditions of ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
2. Historical Contract Non-Performance							
2.1	**History of Non-Performing Contracts**	Termination of a contract[1] did not occur as a result of contractor's default in the past five (5) years.	Must meet requirement[2]	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**	Not under suspension based on execution of a Bid Securing Declaration pursuant to ITB 4.4.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
2.3	**Pending Litigation**	All pending litigation shall in total not represent more than one hundred percent (100%) of the Bidder's net worth and shall be treated as resolved against the Bidder.	Must meet requirement	N/A	Must meet requirement	N/A	Form CON – 2

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

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

<table>
<tr><th rowspan="2">No.</th><th rowspan="2">Subject</th><th rowspan="2">Requirement</th><th rowspan="2">Single Entity</th><th colspan="3">Joint Venture (existing or intended)</th><th rowspan="2">Submission Requirements</th></tr>
<tr><th>All Parties Combined</th><th>Each Member</th><th>One Member</th></tr>
<tr><td colspan="8">3. Financial Situation and Performance</td></tr>
<tr><td>3.1</td><td>Financial Capabilities</td><td>(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as follows for the subject contract(s) net of the Bidder’s other commitments;
<table>
<tr><th>LOT</th><th>CASH FLOW(EUR)</th></tr>
<tr><td>1</td><td>883,000</td></tr>
<tr><td>2</td><td>1,228,000</td></tr>
<tr><td>3</td><td>878,000</td></tr>
<tr><td>4</td><td>751,000</td></tr>
<tr><td>5</td><td>801,000</td></tr>
<tr><td>6</td><td>786,000</td></tr>
<tr><td>7</td><td>1,086,000</td></tr>
<tr><td>8</td><td>842,000</td></tr>
<tr><td>9</td><td>1,040,000</td></tr>
</table></td><td>Must meet requirement</td><td>Must meet requirement</td><td>N/A</td><td>N/A</td><td>Forms FIN-3.1 and FIN-3.3</td></tr>
<tr><td></td><td></td><td>(ii) The Bidder shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract</td><td>Must meet requirement</td><td>Must meet requirement</td><td>N/A</td><td>N/A</td><td>Forms FIN-3.1 and FIN-3.4</td></tr>
</table>

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		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 5 years shall be submitted and must demonstrate the current soundness of the Bidder's financial position based on the following criteria: **a) liquidity ratio ≥ 1.1** ((Current Assets) / (Current Liabilities) **≥ 1.1**) **b) indebtedness ratio ≤ 80%** ((Total Liabilities) x 100 / (Total Assets) **≤ 80%)**	Must meet requirement	N/A	Must meet requirement	N/A	Form FIN–3.1, with attachments
3.2	**Minimum Annual Construction Turnover**	Minimum annual construction turnover of the following amounts in the last 5 years, calculated as total certified annual payments received for contracts in progress and/or completed. **LOT** / **MIN CONSTRUCTION TURNOVER (EUR)** 1 — 5,298,000 2 — 7,369,000 3 — 5,268,000	Must meet requirement	Must meet requirement	Must meet *[twenty five]* per cent *[25]* % of the requirement	Must meet *[forty]* per cent *[40]* % of the requirement	Form FIN – 3.2

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		4 4,506,000 5 4,811,000 6 4,719,000 7 6,516,000 8 5,054,000 9 6,242,000					

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
4. Experience							
4.1	**General Construction Experience**	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor for at least the last 10 years starting 1st January 2012.	Must meet requirement	N/A	Must meet requirement	N/A	Form EXP - 4.1
4.2 (a)	**Specific Construction & Contract Management Experience**	(i) A minimum number of similar[3] contracts specified below that have been satisfactorily and substantially[4] completed as a prime contractor, joint venture member[5], management contractor or sub-contractor between 1st January 2012 and application submission deadline: one or two contracts of minimum total value of; LOT / MIN CONTRACT (EUR) 1 — 3,532,000 2 — 4,912,000 3 — 3,512,000 4 — 3,004,000 5 — 3,207,000	Must meet requirement	Must meet requirement[6]	N/A	N/A	Form EXP - 4.2(a)

[3] The similarity shall be based on the physical size, complexity, methods/technology and/or other characteristics described in Section VII, Work's Requirements. Summation of number of small value contracts (less than the value specified under requirement) to meet the overall requirement will not be accepted.

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

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

[6] 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.

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		6 3,146,000 7 4,344,000 8 3,369,000 9 4,161,000					
4.2 (b)		For the above and any other contracts completed and under implementation as prime contractor, joint venture member, management contractor or sub-contractor[7] on or after the first day of the calendar year during the period stipulated in 4.2 (a) above, a minimum construction experience in the following key activities successfully completed[8] in **any one (1) year** **<u>For Award of Lot 1</u>** The contractor must have been involved in design, supply, installation and commissioning of at least 348 Kilometers of Medium Voltage (11kV or 33kV) and/or Low Voltage (240V & 415V) lines in multiple sites and that were in different geographical locations	Must meet requirements	Must meet requirements	N/A	Must meet the following requirements for the key activities listed below *[list key activities and the corresponding minimum requirements]*	Form EXP - 4.2 (b)

[7] For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder's share shall be counted to meet this requirement.
[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. The rate of production shall be the annual production rate for the key construction activity (or activities).

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		being executed concurrently. **<u>For Award of Lot 2</u>** The contractor must have been involved in design, supply, installation and commissioning of at least 484 Kilometers of Medium Voltage (11kV or 33kV) and/or Low Voltage (240V & 415V) lines in multiple sites and that were in different geographical locations being executed concurrently. **<u>For Award of Lot 3</u>** The contractor must have been involved in design, supply, installation and commissioning of at least 346 Kilometers of Medium Voltage (11kV or 33kV) and/or Low Voltage (240V & 415V) lines in multiple sites and that were in different geographical locations being executed concurrently. **<u>For Award of Lot 4</u>** The contractor must have been involved in design, supply, installation and commissioning of at least 296 Kilometers of					

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		Medium Voltage (11kV or 33kV) and/or Low Voltage (240V & 415V) lines in multiple sites and that were in different geographical locations being executed concurrently. **For Award of Lot 5** The contractor must have been involved in design, supply, installation and commissioning of at least 316 Kilometers of Medium Voltage (11kV or 33kV) and/or Low Voltage (240V & 415V) lines in multiple sites and that were in different geographical locations being executed concurrently. **For Award of Lot 6** The contractor must have been involved in design, supply, installation and commissioning of at least 310 Kilometers of Medium Voltage (11kV or 33kV) and/or Low Voltage (240V & 415V) lines in multiple sites and that were in different geographical locations being executed concurrently.					

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		For Award of Lot 7 The contractor must have been involved in design, supply, installation and commissioning of at least 428 Kilometers of Medium Voltage (11kV or 33kV) and/or Low Voltage (240V & 415V) lines in multiple sites and that were in different geographical locations being executed concurrently. **For Award of Lot 8** The contractor must have been involved in design, supply, installation and commissioning of at least 332 Kilometers of Medium Voltage (11kV or 33kV) and/or Low Voltage (240V & 415V) lines in multiple sites and that were in different geographical locations being executed concurrently. **For Award of Lot 9** The contractor must have been involved in design, supply, installation and commissioning of at least 410 Kilometers of Medium Voltage (11kV or 33kV) and/or Low Voltage (240V & 415V) lines in					

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		multiple sites and that were in different geographical locations being executed concurrently.					
5. Environmental, Social, Health and Safety (ESHS)[9]							
5.1	**ESHS Certification(s)**	Availability of a valid ISO certification or internationally recognized equivalent (equivalency to be demonstrated by Bidder), and applicable to the worksite: • Quality management certificate ISO 9001 ; • Environmental management certificate ISO 14001 ; • Health and safety management certificate ISO 45001 .	Must meet requirement	N/A	N/A	Leader must meet requirement	Form CER Form CER Form CER

[9] Those ESHS qualification criteria may be reduced or deleted if the worksites management is of minor Environmental, Social, Health and Safety impact.

5.2	**ESHS Documentation**	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; 3. Existence of official company procedures for the management of the following relevant points: ✓ ESHS resources and facilities and ESHS monitoring organization; ✓ Health & Safety on worksites; ✓ Hazardous products ✓ Local recruitment and ESHS trainings of local staff (capacity building), ESHS trainings of subcontractors and local partners (transfer of knowledge); ✓ Relations with stakeholders, information and consultation of local communities and authorities; ✓ Biodiversity: protection of fauna and flora;	Must meet requirement	N/A	N/A	Leader must meet requirement	1. The ESHS Ethics Charter of the company or equivalent must be provided. 2. 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. 3. Official internal procedure documents on the topics indicated must be provided. 4. Duly signed Environmental and Social Covenant.

No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		✓ Control of infectious and communicable diseases (HIV/AIDS, malaria, etc.).					
5.3	**Environmental, Social, Health and Safety experience**	The contractor must have been involved in at least 2 projects of high or medium voltage lines with environmental and social risk management actions by the contractor. Copies of the Construction ESMPs produced by the contractor shall be submitted.	Must meet requirements	N/A	N/A	Must meet requirements	Form EXP – 4.3

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Letter of Bid

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

Date: _____
IPC No.: _____
Invitation for Bid No.: _____
Alternative No.: _____

To: _____

We, the undersigned, declare that:

(a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB 8)_____;

(b) We have no conflict of interest in accordance with ITB 4;

(c) We have not been suspended nor declared ineligible by the Employer based on execution of a Bid Securing Declaration in the Employer's country in accordance with ITB 4.4;

(d) We offer to execute in conformity with the Bidding Documents the following Works: _____
_____;

(e) The total price of our Bid, excluding taxes and excluding any discounts offered in item (f) below is:
   i) In case of only one lot, total price (excluding taxes) of the Bid _____
   ii) In case of multiple lots, total price (excluding taxes) of each lot
   _____
   iii) In case of multiple lots, total price (excluding taxes) of all lots (sum of all lots)
   _____

(f) The discounts offered and the methodology for their application are:
   i) The discounts offered are: _____

   ii) The exact method of calculations to determine the net price after application of discounts is shown below: _____

(g) Our bid shall be valid for a period of _____ days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(h) If our bid is accepted, we commit to obtain a performance security in accordance with ITB 42 of the Bidding Documents;

(i) We are not participating, as a Bidder, in more than one bid in this bidding process in accordance with ITB 4.2(e), other than alternative bids submitted in accordance with ITB 13;

(j) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and

(k) We acknowledge and agree that the Employer reserves the right to annul the bidding process and reject all bids at any time prior to contract award without thereby incurring any liability to us;

(l) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption.

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

Title of the person signing the Bid_____

Signature of the person named above_____

Date signed _____ day of _____, _____

*****: In the case of the Bid submitted by a JV specify the name of the JV as Bidder

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

Appendix to Bid

Schedule of Adjustment Data

N/A

Summary of Payment Currencies

N/A

EIB Covenant of Integrity Template

To: _____

"We declare and covenant that neither we nor anyone, including any of our directors, employees, agents, joint venture partners or sub-contractors, where these exist, acting on our behalf with due authority or with our knowledge or consent, or facilitated by us, has engaged, or will engage, in any Prohibited Conduct (as defined below) in connection with the tendering process or in the execution or supply of any works, goods or services for [*specify the contract or tender invitation*] (the "**Contract**") and covenant to so inform you if any instance of any such Prohibited Conduct shall come to the attention of any person in our organisation having responsibility for ensuring compliance with this Covenant.

We shall, for the duration of the tender process and, if we are successful in our tender, for the duration of the Contract, appoint and maintain in office an officer, who shall be a person reasonably satisfactory to you and to whom you shall have full and immediate access, having the duty, and the necessary powers, to ensure compliance with this Covenant.

We declare and covenant that neither we nor anyone, including any of our directors, employees, agents, joint venture partners or sub-contractors, where these exist, acting on our behalf with due authority or with our knowledge or consent, or facilitated by us, (i) is listed or otherwise subject to EU/UN Sanctions and (ii) in connection with the execution or supply of any works, goods or services for the Contract, will act in contravention of EU/UN Sanctions. We covenant to so inform you if any instance shall come to the attention of any person in our organisation having responsibility for ensuring compliance with this Covenant.

If (i) we have been, or any such director, employee, agent or joint venture partner, where this exists, acting as aforesaid has been, convicted in any court or sanctioned by any authority of any offence involving a Prohibited Conduct in connection with any tendering process or provision of works, goods or services during the five years immediately preceding the date of this Covenant, or (ii) any such director, employee, agent or a representative of a joint venture partner, where this exists, has been dismissed or has resigned from any employment on the grounds of being implicated in any Prohibited Conduct, or (iii) we have been, or any of our directors, employees, agents or joint venture partners, where these exist, acting as aforesaid has been excluded or otherwise sanctioned by the EU Institutions or any major Multi-lateral Development Bank (including World Bank Group, African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank or Inter-American Development Bank) from participation in a tendering procedure on the grounds of Prohibited Conduct, we give details of that conviction, dismissal or resignation, or exclusion below, together with details of the measures that we have taken, or shall take, to ensure that neither this company nor any of our directors, employees or agents commits any Prohibited Conduct in connection with the Contract [*give details if necessary*].

We acknowledge that if we are subject to an exclusion decision by the European Investment Bank (EIB), we will not be eligible to be awarded a contract to be financed by the EIB.
We grant [indicate the name of the Project Promoter], the European Investment Bank and auditors appointed by either of them, as well as any authority or European Union institution or

body having competence under European Union law, the right to inspect and copy our books and records and those of all our sub-contractors under the Contract. We accept to preserve these books and records generally in accordance with applicable law but in any case for at least six years from the date of tender submission and in the event we are awarded the Contract, at least six years from the date of substantial performance of the Contract."

Name: _____in the capacity of: _____

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

Signature _____ Dated: _____

Important Note

It should be noted that, in the Covenant of Integrity, the tenderer is requested to self-declare all sanctions and/or exclusions (including any similar decisions having the effect of imposing conditions on the tenderer or its subsidiaries or to exclude the said tenderer or its subsidiaries, such as temporary suspension, conditional non-exclusion, etc.) imposed by the European institutions or any multilateral development banks (including the World Bank Group, the African Development Bank, the Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank or Inter-American Development Bank), regardless of the date of issue and the expiration or not of such decisions and of the current status of any sanction and/or exclusion. In this regard, any omission or misrepresentation, made knowingly or recklessly, may be considered as fraud under the EIB Anti-Fraud Policy. Therefore, the Employer reserves the right to reject any offer presenting an inaccurate or incomplete Covenant of Integrity, and may cause the rejection of the offer for prohibited conduct.

Environmental and Social Covenant Template

We, the undersigned, commit to comply with - and ensure that all of our sub-contractors comply with – all labour laws and regulations applicable in the country of implementation of the contract, as well as all national legislation and regulations and any obligation in the relevant international conventions and multilateral agreements on environment applicable in the country of implementation of the contract.

Labour standards. We further commit to the principles of the eight Core ILO standards[1] pertaining to: child labour, forced labour, non-discrimination and freedom of association and the right to collective bargaining. We will (i) pay rates of wages and benefits and observe conditions of work (including hours of work and days of rest) which are not lower than those established for the trade or industry where the work is carried out; and (ii) keep complete and accurate records of employment of workers at the site.

Workers' relations. We therefore commit to develop and implement a Human Resources Policy and Procedures applicable to all workers employed for the project in line with Standard 8 of the EIB's Environmental and Social Handbook. We will regularly monitor and report on its application to *[insert name of the Contracting Authority]* as well as on any corrective measures periodically deemed necessary.

Occupational and Public Health, Safety and Security. We commit to (i) comply with all applicable health and safety at work laws in the country of implementation of the contract; (ii) develop and implement the necessary health and safety management plans and systems, in accordance with the measures defined in the Project's Environmental and Social Management Plan (ESMP) and the ILO Guidelines on occupational safety and management systems[2]; (iii) provide workers employed for the project access to adequate, safe and hygienic facilities as well as living quarters in line with the provisions of Standard 9 of the EIB's Environmental and Social Handbook for workers living on-site; and (iv) use security management arrangements that are consistent with international human rights standards and principles, if such arrangements are required for the project.

Protection of the Environment. We commit to take all reasonable steps to protect the environment on and off the site and to limit the nuisance to people and property resulting from pollution, noise, traffic and other outcomes of the operations. To this end, emissions, surface discharges and effluent from our activities will comply with the limits, specifications or stipulations as defined in *[insert name of the relevant document]*[3] and the international and national legislation and regulations applicable in the country of implementation of the contract.

Environmental and social performance. We commit to (i) submit *[insert periodicity as indicated in the tender documents]* environmental and social monitoring reports to *[insert name of the Contracting Authority]; and* (ii) comply with the measures assigned to us as set forth in the environmental permits *[insert name of the relevant document if applicable]*[4] and any corrective or preventative actions set forth in the annual environmental and social monitoring report. To this end, we will develop and implement an Environmental and Social Management System commensurate to the size and complexity

[1] **http://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm**
[2] **http://www.ilo.org/safework/info/standards-and-instruments/WCMS_107727/lang--en/index.htm**
[3] For instance: ESIA (Environmental and Social Impact Assessment) and ESMP (Environmental and Social Management Plans).
[4] For instance: ESIA (Environmental and Social Impact Assessment) and ESMP (Environmental and Social Management Plans).

of the Contract and provide *[insert name of the Contracting Authority]* with the details of the (i) plans and procedures, (ii) roles and responsibilities and (iii) relevant monitoring and review reports.

We hereby declare that our tender price as offered for this contract includes all costs related to our environmental and social performance obligations as part of this contract. We commit to (i) reassess, in consultation with *[insert name of the Contracting Authority]*, any changes to the project design that may potentially cause negative environmental or social impacts; (ii) provide *[insert name of the Contracting Authority]* with a written notice and in a timely manner of any unanticipated environmental or social risks or impacts that arise during the execution of the contract and the implementation of the project previously not taken into account; and (iii) in consultation with *[insert name of the Contracting Authority]*, adjust environmental and social monitoring and mitigation measures as necessary to assure compliance with our environmental and social obligations.

Environmental and social staff. We shall facilitate the contracting authority's ongoing monitoring and supervision of our compliance with the environmental and social obligations described above. For this purpose, we shall appoint and maintain in office until the completion of the contract an Environmental and Social Management Team (scaled to the size and complexity of the Contract) that shall be reasonably satisfactory to the Contracting Authority and to whom the Contracting Authority shall have full and immediate access, having the duty and the necessary powers to ensure compliance with this Environmental and Social Covenant.

We accord the Contracting Authority and the EIB and auditors appointed by either of them, the right of inspection of all our accounts, records, electronic data and documents related to the environmental and social aspects of the current contract, as well as all those of our sub-contractors.

Name In the capacity of

Signed

Duly authorised to sign the contract for and on behalf of
Date

Note to the Promoter: This Environmental and Social Covenant must be sent to the Bank together with the contract in the case of an International Procurement Procedure (as defined in Article 3.3.2). In other cases, it must be kept by the Promoter and made available upon request to the Bank

Price Schedules

Rates and prices shall exclude taxes and the Schedules shall identify the tax estimate as a separate amount. Information on applicable tax exemptions is provided in Sub-Clause 14.1 (b) of the Particular Conditions of Contract.

The Schedules must be prepared in accordance with the currency alternatives in BDS – ITB 15.1.

In completing the price schedules, the prices quoted shall cover all items, accessories, fittings, equipment, labour, works, sound engineering practice and Compliance with Environmental and Social Management Conditions in order to deliver a complete project in every aspect. All works not expressly called for in the Specification and/or Schedules but are necessary for the complete and proper supply, erection, operation and maintenance of the Works shall be performed and furnished by the Contractor at no additional cost to the employer.

NB 1: Lot per KM wherever used in these price schedules implies that the bidder in their costs shall factor in enough quantities to cover one kilometer for the item in question.

NB 2: Bidders are advised to assume 70m of MV span length and 50m LV span length for purposes of bidding.

PRICE SCHEDULES - KP1/6E.3/OT/9/22/B02 LOT 1

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
	Conductors					
1.	Lot 1-101	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	600		
2.	Lot 1-102	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	600		
	LV LINES (522kms of 1 phase 2-wire LV line using 50mm² AA conductor)					
3.	Lot 1-103(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,081		
	Lot 1-103(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	104		
4.	Lot 1-104(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	8,361		
	Lot 1-104(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	418		
5.	Lot 1-105	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	19		
6.	Lot 1-106	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	77		
7.	Lot 1-107	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	16		
8.	Lot 1-108	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	62		
9.	Lot 1-109	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1)*	lot/pole.	19		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/07/001) *(TSP/03/022)* *(TSP/04/017-1)*				
10.	Lot 1-110	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	77		
11.	Lot 1-111	11kV Concrete Pole fittings- for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole.	16		
12.	Lot 1-112	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)*	lot/pole.	62		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)				
13.	Lot 1-113(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/02/004) (TSP/02/003-1) (TSP/04/011) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022)*	lot/pole	2,497		
	Lot 1-113(b)	LV Stays(c/w stay block and stay accessories)	No	1,248		
14.	Lot 1-114(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/02/004) (TSP/02/003-1) (TSP/04/011) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022)*	lot/pole	10,033		
	Lot 1-114(b)	LV Stays(c/w stay block and stay accessories)	No	5,016		
15.	Lot 1-115	Protective Multiple Earthing system *(TSP/06/031-1)*	No	2,611		
16.	Lot 1-116	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003) (TSP/06/035) (TSP/04/011) (TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 10,444 customers**)**				
17.	Lot 1-117	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core	m	208,880		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		Copper Communication Cable) *(TSP/05/004)*				
18.	Lot 1-118	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	20,888		
19.	Lot 1-119	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	8,355		
20.	Lot 1-120	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,089		
21.	Lot 1-121	Earth Rod and Clamp *(TSP/06/031-1)*	no	7,311		
22.	Lot 1-122	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	21,933		
23.	Lot 1-123	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	10,444		
24.	Lot 1-124	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	10,444		
25.	Lot 1-125	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	7,311		
26.	Lot 1-126	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	7,311		
		Others				

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
27.	Lot 1-127	LV Parallel Groove Clamps	No.	10,444		
28.	Lot 1-128	50mm2 LV piercing clamps	No.	10,444		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1
Refer to attached annex for detailed construction units
Refer to document number (In brackets) for specifications of each item

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
	Conductors					
1.	Lot 1-201	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	600		
2.	Lot 1-202	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	600		
	LV LINES (522kms of 1 phase 2-wire LV line using 50mm² AA conductor)					
3.	Lot 1-203(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,081		
	Lot 1-203(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	104		
4.	Lot 1-204(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	8,361		
	Lot 1-204(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	418		
5.	Lot 1-205	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	19		
6.	Lot 1-206	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	77		
7.	Lot 1-207	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	16		
8.	Lot 1-208	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	62		
9.	Lot 1-209	33kV Concrete Pole fittings- for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	19		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
10.	Lot 1-210	33kV Wooden Pole fittings- for mid-span poles(cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	77		
11.	Lot 1-211	11kV Concrete Pole fittings-for mid span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole.	16		
12.	Lot 1-212	11kV Wooden Pole fittings- (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022)*	lot/pole	62		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/04/017-1)				
13.	Lot 1-213(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,497		
	Lot 1-213(b)	LV Stays(c/w stay block and stay accessories)	no	1,248		
14.	Lot 1-214(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	10,033		
	Lot 1-214(b)	LV Stays(c/w stay block and stay accessories)	no	5,016		
15.	Lot 1-215	Protective Multiple Earthing system *(TSP/06/031-1)*	no	2,611		
16.	Lot 1-216	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 10,444 customers**)**				
17.	Lot 1-217	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	208,880		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 1-218	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	20,888		
19.	Lot 1-219	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	8,355		
20.	Lot 1-220	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,089		
21.	Lot 1-221	Earth Rod and Clamp *(TSP/06/031-1)*	no	7,311		
22.	Lot 1-222	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	21,933		
23.	Lot 1-223	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	10,444		
24.	Lot 1-224	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	10,444		
25.	Lot 1-225	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	7,311		
26.	Lot 1-226	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	7,311		
		Others				
27.	Lot 1-227	LV Parallel Groove Clamps	No.	10,444		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28.	Lot 1-228	50mm2 LV piercing clamps	No.	10,444		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1
Refer to attached annex for detailed construction units
Refer to document number (In brackets) for specifications of each item

Schedule No. 3. Design Services

Carry out Survey, premises picking, customer sensitization, customer data collection, transformer positioning/picking, wayleaves acquisition and detailed design for the following (including design proposals/information updating on the KPLC Facility Data Base (FDB)):

Note: All Tee-offs from three phase transformers shall be in three-phase four-wire for purposes of proper load balancing. Where an existing three phase transformer has single phase t-off, this shall be converted to three-phase four-wire.

Item		Description	Unit	Qty.	Unit Price[1]		Total Price[1]
					Local Currency Portion	Foreign Currency Portion	
				(1)	*(2)*	*(optional)*	*(1) x (2)*
1	Lot 1-305	Low Voltage Line Design(Single Phase / 3 Phase)	km	522			
TOTAL (to Schedule No. 7. Grand Summary)							

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Schedule No. 4. Installation and Other Services

NB: The installation costs should include transport from employer's store to site/ contractor's site store for materials being issued by KPLC

	Item	Description	Unit	Qty.	Unit Price[1]		Total Price[1]	
					Foreign Currency Portion	Local Currency Portion	Foreign	Local
				(1)	*(2)*	*(3)*	*(1) x (2)*	*(1) x (3)*
		Pegging, Holes Digging, Pole erection & dressing, Stay Making and stringing of LV lines; 1-phase 2-wire. (Note : pole dressing shall include all circuit formations for completeness of work.)						
1	Lot 1-407	Pole erection & dressing- Wooden	no	8,361				
2	Lot 1-408	Pole erection & dressing- Concrete	no	2,081				
3	Lot 1-409	Conductor Stringing including trace clearance as per KPLC standard	km	522				
4	Lot 1-410	LV Stay making & Erection	no	6,264				
5	Lot 1-411	PME installation	No	2,611				
6	Lot 1-412	LV line transfer	km	10				
7	Lot 1-413	Recovery of LV wooden pole recovery for re-use	no	50				
8	Lot 1-414	Recovery of Concrete LV pole recovery for re-use	no	50				
		Service Line						
9	Lot 1-415	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	10,444				
10	Lot 1-416	Installation of Ready Boards, Earthing and Testing	No.	7,311				

11	Lot 1-417	Installation of wall mounted metallic customer meter boards complete with MCB and service cable termination	No	7,311				
12	Lot 1-418	As constructed drawings complete with update on KPLC FDB system	Lot	1				
		Other services						
13	Lot 1-419	**Offices facilities :** Provide site office complete with communication facilities	Months	18				
14	Lot 1-420	Provision of Transport Services: Provide transport for KPLC Project Implementation Team for Project supervision and coordination of activities (2 No. 4X4 Vehicles)	Months	18				
15	Lot 1-421	(G. C. C. 7.4): Factory Acceptance Tests for Major Items	Lumpsum	1				
16	Lot 1-422	Customer Account creation, contracting(in InCMS) and issuance of Class C-2 EPRA Wiring Certificates	No.	10,444				
		TOTAL (to Schedule No. 7. Grand Summary)						
					Name of Bidder			
					Signature of Bidder			
		[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1						

Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT *[specify currency]*	VAT Amount
ESHS 1	**Environmental, Social, Health and Safety Management System**	Clause1,2,3,4,5,6, 7, 8 and 9	Lump sum		
ESHS 2	**Protection of the Environment**	Clauses 10,11,12, 13, 14, 15, 16, 17, 18, 19 and 20.	Lump sum		
ESHS 3	**Health & Safety**	Clauses 21,22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37	Lump sum		
ESHS 4	**Local Labour and Relations with Local Communities**	Clauses 38, 39, 40, 41, 42, 43 and 44	Lump sum		
TOTAL (to Schedule No. 7. Grand Summary)				_____	_____
				Name of Bidder……. Signature of Bidder …….	
ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications). Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.					

Schedule No. 6. Recommended Spare Parts

Item	Description	Unit	Qty.	Unit Price		Total Price
			(1)	CIF or CIP (foreign parts) *(2)*	EXW (local parts) *(3)*	*(1) x (2) or(3)*
ST 007	LV Fuse carriers complete with fuses (Various sizes) for transformer LV circuits protection	pcs	60			
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 7. Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
1.	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
2.	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
3.	Total Schedule No. 3. Design Services		
4.	Total Schedule No. 4. Installation and Other Services		
5.	Total Schedule No. 5. Environmental, Social, Health and Safety (ESHS)		
6.	Total Schedule No. 6. Recommended Spare Parts		
	TOTAL (to Bid Form)		

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies

PRICE SCHEDULES - KP1/6E.3/OT/9/22/B02 LOT 2

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		Conductors				
1.	Lot 2-101	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	835		
2.	Lot 2-102	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	835		
		LV LINES (726kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 2-103(a)	10M LV Concrete Pole *(TSP/03/005-1)*	no	2,901		
	Lot 2-103(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	no	145		
4.	Lot 2-104(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	no	11,621		
	Lot 2-104(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	no	581		
5.	Lot 2-105	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	27		
6.	Lot 2-106	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	106		
7.	Lot 2-107	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	22		
8.	Lot 2-108	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	87		
9.	Lot 2-109	33kV Concrete Pole fittings-for mid-span poles(cross arms, Multipurpose/universal clamps, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	27		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		(TSP/04/017-1)				
10.	Lot 2-110	33kV Wooden Pole fittings- for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole.	106		
11.	Lot 2-111	11kV Concrete Pole fittings- for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	22		
12.	Lot 2-112	11kV Wooden Pole fittings- for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)*	lot/pole.	87		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 2-113(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	3,481		
	Lot 2-113(b)	LV Stays(c/w stay block and stay accessories)	no	1,740		
14.	Lot 2-114(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	13,945		
	Lot 2-114(b)	LV Stays(c/w stay block and stay accessories)	no	6,972		
15.	Lot 2-115	Protective Multiple Earthing system *(TSP/06/031-1)*	No	3,631		
16.	Lot 2-116	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 14,582 customers**)**				
17.	Lot 2-117	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	291,640		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
18.	Lot 2-118	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	29,164		
19.	Lot 2-119	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	11,666		
20.	Lot 2-120	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,916		
21.	Lot 2-121	Earth Rod and Clamp *(TSP/06/031-1)*	no	10,207		
22.	Lot 2-122	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	30,621		
23.	Lot 2-123	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	14,582		
24.	Lot 2-124	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	14,582		
25.	Lot 2-125	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	10,207		
26.	Lot 2-126	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	10,207		
		Others				
27.	Lot 2-127	LV Parallel Groove Clamps	No.	14,582		
28.	Lot 2-128	50mm2 LV piercing clamps	No.	14,582		

Item		**Description**	**Unit**	**Qty.** **(1)**	**CIP Unit Price1 (2)**	**CIP Total Price1 (1) x (2)**
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		Conductors				
1.	Lot 2-201	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	835		
2.	Lot 2-202	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	835		
		LV LINES (726kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 2-203(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,901		
	Lot 2-203(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	145		
4.	Lot 2-204(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	11,621		
	Lot 2-204(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	581		
5.	Lot 2-205	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	27		
6.	Lot 2-206	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	106		
7.	Lot 2-207	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	22		
8.	Lot 2-208	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	87		
9.	Lot 2-209	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	Lot/pole.	27		

Item		**Description**	**Unit**	**Qty.** **(1)**	**CIP Unit Price1 (2)**	**CIP Total Price1 (1) x (2)**
10.	Lot 2-210	33kV Wooden Pole fittings- for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	Lot/pole.	106		
11.	Lot 2-211	11kV Concrete Pole fittings- for mid-span pole (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	22		
12.	Lot 2-212	11kV Wooden Pole fittings- for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022)*	lot/pole	87		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		(TSP/04/017-1)				
13.	Lot 2-213(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	3,481		
	Lot 2-213(b)	LV Stays(c/w stay block and stay accessories)	No	1,740		
14.	Lot 2-214(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	13,945		
	Lot 2-214(b)	LV Stays(c/w stay block and stay accessories)	No	6,972		
15.	Lot 2-215	Protective Multiple Earthing system *(TSP/06/031-1)*	no	3,631		
16.	Lot 2-216	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 14,582 customers**)**				
17.	Lot 2-217	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	291,640		
18.	Lot 2-218	10mm² dropper cable Red and Black; 1m each for single phase meters	m	29,164		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		(TSP/05/016)				
19.	Lot 2-219	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	11,666		
20.	Lot 2-220	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,916		
21.	Lot 2-221	Earth Rod and Clamp *(TSP/06/031-1)*	no	10,207		
22.	Lot 2-222	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	30,621		
23.	Lot 2-223	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	14,582		
24.	Lot 2-224	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	14,582		
25.	Lot 2-225	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	10,207		
26.	Lot 2-226	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	10,207		
		Others				
27.	Lot 2-227	LV Parallel Groove Clamps	No.	14,582		
28.	Lot 2-228	50mm2 LV piercing clamps	No.	14,582		
TOTAL (to Schedule No. 7. Grand Summary)						

Item	**Description**	**Unit**	**Qty.** **(1)**	**CIP Unit Price1 (2)**	**CIP Total Price1 (1) x (2)**
			Name of Bidder _____		
			Signature of Bidder _____		

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 3. Design Services

Carry out Survey, premises picking, customer sensitization, customer data collection, transformer positioning/picking, wayleaves acquisition and detailed design for the following (including design proposals/information updating on the KPLC Facility Data Base (FDB)):

Note: All Tee-offs from three phase transformers shall be in three-phase four-wire for purposes of proper load balancing. Where an existing three phase transformer has single phase t-off, this shall be converted to three-phase four-wire.

Item		Description	Unit	Qty.	Unit Price[1]		Total Price[1]
					Local Currency Portion	Foreign Currency Portion	
				(1)	*(2)*	*(optional)*	*(1) x (2)*
1	Lot 2-305	Low Voltage Line Design(Single Phase / 3 Phase)	km	726			
TOTAL (to Schedule No. 7. Grand Summary)							

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Schedule No. 4. Installation and Other Services

NB : The installation costs should include transport from employer's store to site/ contractor's site store for materials being issued by KPLC

	Item	Description	Unit	Qty.	Unit Price[1]		Total Price[1]	
					Foreign Currency Portion	Local Currency Portion	Foreign	Local
				(1)	*(2)*	*(3)*	*(1) x (2)*	*(1) x (3)*
		Pegging, Holes Digging, Pole erection & dressing, Stay Making and stringing of LV lines; 1-phase 2-wire. (Note : pole dressing shall include all circuit formations for completeness of work.)						
1	Lot 2-407	Pole erection & dressing- Wooden	No	11,621				
2	Lot 2-408	Pole erection & dressing- Concrete	No	2,901				
3	Lot 2-409	Conductor Stringing including trace clearance as per KPLC standard	km	756				
4	Lot 2-410	LV Stay making & Erection	No	9,072				
5	Lot 2-411	PME installation	No	3,781				
6	Lot 2-412	LV line transfer	km	10				
7	Lot 2-413	Recovery of LV wooden pole recovery for re-use	no	50				
8	Lot 2-414	Recovery of Concrete LV pole recovery for re-use	no	50				
		Service Line						
9	Lot 2-415	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	14,582				
10	Lot 2-416	Installation of Ready Boards, Earthing and Testing	No.	10,207				

11	Lot 2-416	Installation of wall mounted metallic customer meter boards complete with MCB and service cable termination	No	10,207				
12	Lot 2-416	As constructed drawings complete with update on KPLC FDB system	Lot	1				
		Other services						
13	Lot 2-417	**Offices facilities :** Provide site office complete with communication facilities	Months	18				
14	Lot 2-418	Provision of Transport Services: Provide transport for KPLC Project Implementation Team for Project supervision and coordination of activities (2 No. 4X4 Vehicles)	Months	18				
15	Lot 2-421	(G. C. C. 7.4): Factory Acceptance Tests for Major Items	Lumpsum	1				
16	Lot 2-422	Customer Account creation, contracting(in InCMS) and issuance of Class C-2 EPRA Wiring Certificates	No.	14,582				
		TOTAL (to Schedule No. 7. Grand Summary)						
					Name of Bidder		_____	
					Signature of Bidder		_____	
		[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1						

Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT *[specify currency]*	VAT Amount
ESHS 1	**Environmental, Social, Health and Safety Management System**	Clause1,2,3,4,5,6, 7, 8 and 9	Lump sum		
ESHS 2	**Protection of the Environment**	Clauses 10,11,12, 13, 14, 15, 16, 17, 18, 19 and 20.	Lump sum		
ESHS 3	**Health & Safety**	Clauses 21,22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37	Lump sum		
ESHS 4	**Local Labour and Relations with Local Communities**	Clauses 38, 39, 40, 41, 42, 43 and 44	Lump sum		
TOTAL (to Schedule No. 7. Grand Summary)				_____	_____
				Name of Bidder……. Signature of Bidder …….	
ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications). Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.					

Schedule No. 6. Recommended Spare Parts

Item	Description	Unit	Qty.	Unit Price		Total Price
				CIF or CIP (foreign parts)	EXW (local parts)	
			(1)	*(2)*	*(3)*	*(1) x (2) or(3)*
ST 007	LV Fuse carriers complete with fuses (Various sizes) for transformer LV circuits protection	pcs	60			
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 7. Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
1.	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
2.	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
3.	Total Schedule No. 3. Design Services		
4.	Total Schedule No. 4. Installation and Other Services		
5.	Total Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)		
6.	Total Schedule No. 6. Recommended Spare Parts		
	TOTAL (to Bid Form)		

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies

PRICE SCHEDULES - KP1/6E.3/OT/9/22/B02 LOT 3

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		Conductors				
1.	Lot 3-101	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	597		
2.	Lot 3-102	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	597		
		LV LINES (519kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 3-103(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,081		
	Lot 3-103(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	104		
4.	Lot 3-104(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	8,301		
	Lot 3-104(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	415		
5.	Lot 3-105	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	19		
6.	Lot 3-106	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	76		
7.	Lot 3-107	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	16		
8.	Lot 3-108	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	62		
9.	Lot 3-109	33kV Concrete Pole fittings- for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022)*	lot/pole.	19		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/04/017-1)				
10.	Lot 3-110	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	76		
11.	Lot 3-111	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	16		
12.	Lot 3-112	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001)*	lot/pole	62		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 3-113(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,497		
	Lot 3-113(b)	LV Stays(c/w stay block and stay accessories)	No	1,248		
14.	Lot 3-114(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	9,961		
	Lot 3-114(b)	LV Stays(c/w stay block and stay accessories)	No	4,980		
15.	Lot 3-115	Protective Multiple Earthing system *(TSP/06/031-1)*	No	2,596		
16.	Lot 3-116	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 10,413 customers)				
17.	Lot 3-117	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	208,260		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 3-118	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	20,826		
19.	Lot 3-119	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	8,330		
20.	Lot 3-120	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,083		
21.	Lot 3-121	Earth Rod and Clamp *(TSP/06/031-1)*	no	7,289		
22.	Lot 3-122	Earth cable (2.5mm² copper cable c/w conduits) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	21,867		
23.	Lot 3-123	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	10,413		
24.	Lot 3-124	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	10,413		
25.	Lot 3-125	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	7,289		
26.	Lot 3-126	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	7,289		
		Others				
27.	Lot 3-127	LV Parallel Groove Clamps	No.	10,413		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28.	Lot 3-128	50mm2 LV piercing clamps	No.	10,413		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1
Refer to attached annex for detailed construction units
Refer to document number (In brackets) for specifications of each item

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		Conductors				
1.	Lot 3-201	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	597		
2.	Lot 3-202	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	597		
		LV LINES (519kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 3-203(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,081		
	Lot 3-203(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	104		
4.	Lot 3-204(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	8,301		
	Lot 3-204(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	415		
5.	Lot 3-205	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	19		
6.	Lot 3-206	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	76		
7.	Lot 3-207	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	16		
8.	Lot 3-208	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	62		
9.	Lot 3-209	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	19		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/04/017-1)				
10.	Lot 3-210	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	76		
11.	Lot 3-211	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	16		
12.	Lot 3-212	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001)*	lot/pole	62		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 3-213(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,497		
	Lot 3-213(b)	LV Stays(c/w stay block and stay accessories)	No	1,248		
14.	Lot 3-214(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	9,961		
	Lot 3-214(b)	LV Stays(c/w stay block and stay accessories)	No	4,980		
15.	Lot 3-215	Protective Multiple Earthing system *(TSP/06/031-1)*	no	2,596		
16.	Lot 3-216	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 10,413 customers)				
17.	Lot 3-217	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	208,260		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 3-218	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	20,826		
19.	Lot 3-219	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	8,330		
20.	Lot 3-220	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,083		
21.	Lot 3-221	Earth Rod and Clamp *(TSP/06/031-1)*	no	7,289		
22.	Lot 3-222	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	21,867		
23.	Lot 3-223	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	10,413		
24.	Lot 3-224	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	10,413		
25.	Lot 3-225	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	7,289		
26.	Lot 3-226	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	7,289		
		Others				
27.	Lot 3-227	LV Parallel Groove Clamps	No.	10,413		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28.	Lot 3-228	50mm2 LV piercing clamps	No.	10,413		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1
Refer to attached annex for detailed construction units
Refer to document number (In brackets) for specifications of each item

Schedule No. 3. Design Services

Carry out Survey, premises picking, customer sensitization, customer data collection, transformer positioning/picking, wayleaves acquisition and detailed design for the following (including design proposals/information updating on the KPLC Facility Data Base (FDB)):

Note: All Tee-offs from three phase transformers shall be in three-phase four-wire for purposes of proper load balancing. Where an existing three phase transformer has single phase t-off, this shall be converted to three-phase four-wire.

Item		Description	Unit	Qty.	Unit Price[1]		Total Price[1]
					Local Currency Portion	Foreign Currency Portion	
				(1)	*(2)*	*(optional)*	*(1) x (2)*
1	Lot 3-305	Low Voltage Line Design(Single Phase / 3 Phase)	km	519			
TOTAL (to Schedule No. 7. Grand Summary)							

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Schedule No. 4. Installation and Other Services

NB : The installation costs should include transport from employer's store to site/ contractor's site store for materials being issued by KPLC

	Item	Description	Unit	Qty.	Unit Price[1]		Total Price[1]	
					Foreign Currency Portion	Local Currency Portion	Foreign	Local
				(1)	*(2)*	*(3)*	*(1) x (2)*	*(1) x (3)*
		Pegging, Holes Digging, Pole erection & dressing, Stay Making and stringing of LV lines; 1-phase 2-wire. (Note : pole dressing shall include all circuit formations for completeness of work.)						
1	Lot 3-407	Pole erection & dressing- Wooden	No	8,301				
2	Lot 3-408	Pole erection & dressing- Concrete	No	2,081				
3	Lot 3-409	Conductor Stringing including trace clearance as per KPLC standard	km	519				
4	Lot 3-410	LV Stay making & Erection	No	6,228				
5	Lot 3-411	PME installation	No	2,596				
6	Lot 3-412	LV line transfer	km	10				
7	Lot 3-413	Recovery of LV wooden pole recovery for re-use	no	50				
8	Lot 3-414	Recovery of Concrete LV pole recovery for re-use	no	50				
		Service Line						
9	Lot 3-415	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	10,413				
10	Lot 3-416	Installation of Ready Boards, Earthing and Testing	No.	7,289				

11	Lot 3-417	Installation of wall mounted metallic customer meter boards complete with MCB and service cable termination	No	7,289				
12	Lot 3-418	As constructed drawings complete with update on KPLC FDB system	Lot	1				
		Other services						
13	Lot 3-419	**Offices facilities :** Provide site office complete with communication facilities	Months	18				
14	Lot 3-420	Provision of Transport Services: Provide transport for KPLC Project Implementation Team for Project supervision and coordination of activities (2 No. 4X4 Vehicles)	Months	18				
15	Lot 3-421	(G. C. C. 7.4): Factory Acceptance Tests for Major Items	Lumpsum	1				
16	Lot 3-422	Customer Account creation, contracting(in InCMS) and issuance of Class C-2 EPRA Wiring Certificates	No.	10,413				
		TOTAL (to Schedule No. 7. Grand Summary)						
					Name of Bidder		_____	
					Signature of Bidder		_____	
		[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1						

Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT *[specify currency]*	VAT Amount
ESHS 1	**Environmental, Social, Health and Safety Management System**	Clause1,2,3,4,5,6, 7, 8 and 9	Lump sum		
ESHS 2	**Protection of the Environment**	Clauses 10,11,12, 13, 14, 15, 16, 17, 18, 19 and 20.	Lump sum		
ESHS 3	**Health & Safety**	Clauses 21,22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37	Lump sum		
ESHS 4	**Local Labour and Relations with Local Communities**	Clauses 38, 39, 40, 41, 42, 43 and 44	Lump sum		
TOTAL (to Schedule No. 7. Grand Summary)				_____	_____
				Name of Bidder……. Signature of Bidder …….	

ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications).

Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.

Schedule No. 6. Recommended Spare Parts

Item	Description	Unit	Qty. *(1)*	Unit Price CIF or CIP (foreign parts) *(2)*	Unit Price EXW (local parts) *(3)*	Total Price *(1) x (2) or(3)*
ST 007	LV Fuse carriers complete with fuses (Various sizes) for transformer LV circuits protection	pcs	60			
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 7. Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
1.	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
2.	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
3.	Total Schedule No. 3. Design Services		
4.	Total Schedule No. 4. Installation and Other Services		
5.	Total Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)		
6.	Total Schedule No. 6. Recommended Spare Parts		
	TOTAL (to Bid Form)		

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies

PRICE SCHEDULES - KP1/6E.3/OT/9/22/B02 LOT 4

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		Conductors				
1	Lot 4-101	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	511		
2	Lot 4-102	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	511		
		LV LINES (444kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3	Lot 4-103(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	1,781		
	Lot 4-103(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	89		
4	Lot 4-104(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	7,101		
	Lot 4-104(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	355		
5	Lot 4-105	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	16		
6	Lot 4-106	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	65		
7	Lot 4-107	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	13		
8	Lot 4-108	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	54		
9	Lot 4-109	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	16		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/04/017-1)				
10	Lot 4-110	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	65		
11	Lot 4-111	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	13		
12	Lot 4-112	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001)*	lot/pole	54		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/03/022) *(TSP/04/017-1)*				
13	Lot 4-113(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,137		
	Lot 4-113(b)	LV Stays(c/w stay block and stay accessories)	No	1,068		
14	Lot 4-114(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	8,521		
	Lot 4-114(b)	LV Stays(c/w stay block and stay accessories)	No	4,260		
15	Lot 4-115	Protective Multiple Earthing system *(TSP/06/031-1)*	No	2,221		
16	Lot 4-116	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	20		
		SERVICE LINES (Service cable to connect 8901 customers)				
17	Lot 4-117	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	178,020		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18	Lot 4-118	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	17,802		
19	Lot 4-119	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	7,121		
20	Lot 4-120	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	1,780		
21	Lot 4-121	Earth Rod and Clamp *(TSP/06/031-1)*	no	6,231		
22	Lot 4-122	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	18,693		
23	Lot 4-123	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	8,901		
24	Lot 4-124	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	8,901		
25	Lot 4-125	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	6,231		
26	Lot 4-126	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	6,231		
		Others				
27	Lot 4-127	LV Parallel Groove Clamps	No.	8,901		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28	Lot 4-128	50mm2 LV piercing clamps	No.	8,901		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		Conductors				
1	Lot 4-201	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	511		
2	Lot 4-202	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	511		
		LV LINES (444kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3	Lot 4-203(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	1,781		
	Lot 4-203(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	89		
4	Lot 4-204(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	7,101		
	Lot 4-204(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	355		
5	Lot 4-205	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	16		
6	Lot 4-206	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	65		
7	Lot 4-207	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	13		
8	Lot 4-208	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	54		
9	Lot 4-209	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	16		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/04/017-1)				
10	Lot 4-210	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	65		
11	Lot 4-211	11kV Concrete Pole fittings-for mid span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	13		
12	Lot 4-212	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001)*	lot/pole	54		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/03/022) *(TSP/04/017-1)*				
13	Lot 4-213(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,137		
	Lot 4-213(b)	LV Stays(c/w stay block and stay accessories)	No	1,068		
14	Lot 4-214(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	8,521		
	Lot 4-214(b)	LV Stays(c/w stay block and stay accessories)	No	4,260		
15	Lot 4-215	Protective Multiple Earthing system *(TSP/06/031-1)*	no	2,221		
16	Lot 4-216	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	20		
		SERVICE LINES (Service cable to connect 8901 customers)				
17	Lot 4-217	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	178,020		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18	Lot 4-218	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	17,802		
19	Lot 4-219	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	7,121		
20	Lot 4-220	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	1,780		
21	Lot 4-221	Earth Rod and Clamp *(TSP/06/031-1)*	no	6,231		
22	Lot 4-222	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	18,693		
23	Lot 4-223	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	8,901		
24	Lot 4-224	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	8,901		
25	Lot 4-225	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	6,231		
26	Lot 4-226	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	6,231		
		Others				
27	Lot 4-227	LV Parallel Groove Clamps	No.	8,901		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28	Lot 4-228	50mm2 LV piercing clamps	No.	8,901		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 3. Design Services

Carry out Survey, premises picking, customer sensitization, customer data collection, transformer positioning/picking, wayleaves acquisition and detailed design for the following (including design proposals/information updating on the KPLC Facility Data Base (FDB)):

Note: All Tee-offs from three phase transformers shall be in three-phase four-wire for purposes of proper load balancing. Where an existing three phase transformer has single phase t-off, this shall be converted to three-phase four-wire.

Item		Description	Unit	Qty.	Unit Price[1]		Total Price[1]
					Local Currency Portion	Foreign Currency Portion	
				(1)	*(2)*	*(optional)*	*(1) x (2)*
1	Lot 4-305	Low Voltage Line Design(Single Phase / 3 Phase)	km	444			
TOTAL (to Schedule No. 7. Grand Summary)							

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Schedule No. 4. Installation and Other Services

NB : The installation costs should include transport from employer's store to site/ contractor's site store for materials being issued by KPLC

	Item	Description	Unit	Qty.	Unit Price[1]		Total Price[1]	
					Foreign Currency Portion	Local Currency Portion	Foreign	Local
				(1)	*(2)*	*(3)*	*(1) x (2)*	*(1) x (3)*
		Pegging, Hole Digging, Pole erection & dressing, Stay Making and stringing of LV lines; 1-phase 2-wire. (Note : pole dressing shall include all circuit formations for completeness of work.)						
1	Lot 4-407	Pole erection & dressing- Wooden	No	7.101				
2	Lot 4-408	Pole erection & dressing- Concrete	No	1,781				
3	Lot 4-409	Conductor Stringing including trace clearance as per KPLC standard	km	444				
4	Lot 4-410	LV Stay making & Erection	No	5,328				
5	Lot 4-411	PME installation	No	2,221				
6	Lot 4-412	LV line transfer	km	10				
7	Lot 4-413	Recovery of LV wooden pole recovery for re-use	no	50				
8	Lot 4-414	Recovery of Concrete LV pole recovery for re-use	no	50				
		Service Line						
9	Lot 4-415	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	8,901				
10	Lot 4-416	Installation of Ready Boards, Earthing and Testing	No.	6,231				
11	Lot 4-417	Installation of wall mounted metallic customer meter boards complete with MCB and	No	6,231				

		service cable termination						
12	Lot 4-418	As constructed drawings complete with update on KPLC FDB system	Lot	1				
		Other services						
13	Lot 4-419	**Offices facilities :** Provide site office complete with communication facilities	Months	18				
14	Lot 4-420	Provision of Transport Services: Provide transport for KPLC Project Implementation Team for Project supervision and coordination of activities (2 No. 4X4 Vehicles)	Months	18				
15	Lot 4-421	(G. C. C. 7.4): Factory Acceptance Tests for Major Items	Lumpsum	1				
16	Lot 4-422	Customer Account creation, contracting(in InCMS) and issuance of Class C-2 EPRA Wiring Certificates	No.	8,901				
		TOTAL (to Schedule No. 7. Grand Summary)						
					Name of Bidder		_____	
					Signature of Bidder		_____	
		[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1						

Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT *[specify currency]*	VAT Amount
ESHS 1	**Environmental, Social, Health and Safety Management System**	Clause1,2,3,4,5,6, 7, 8 and 9	Lump sum		
ESHS 2	**Protection of the Environment**	Clauses 10,11,12, 13, 14, 15, 16, 17, 18, 19 and 20.	Lump sum		
ESHS 3	**Health & Safety**	Clauses 21,22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37	Lump sum		
ESHS 4	**Local Labour and Relations with Local Communities**	Clauses 38, 39, 40, 41, 42, 43 and 44	Lump sum		
TOTAL (to Schedule No. 7. Grand Summary)				_____	_____
				Name of Bidder……. Signature of Bidder …….	

ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications).

Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.

Schedule No. 6. Recommended Spare Parts

Item	Description	Unit	Qty.	Unit Price		Total Price
			(1)	CIF or CIP (foreign parts) *(2)*	EXW (local parts) *(3)*	*(1) x (2) or(3)*
ST 007	LV Fuse carriers complete with fuses (Various sizes) for transformer LV circuits protection	pcs	60			
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 7. Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
1.	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
2.	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
3.	Total Schedule No. 3. Design Services		
4.	Total Schedule No. 4. Installation and Other Services		
5.	Total Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)		
6.	Total Schedule No. 6. Recommended Spare Parts		
	TOTAL (to Bid Form)		

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies

PRICE SCHEDULES - KP1/6E.3/OT/9/22/B02 LOT 5

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
	Conductors					
1	Lot 5-101	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	545		
2	Lot 5-102	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	545		
	LV LINES (474kms of 1 phase 2-wire LV line using 50mm² AA conductor)					
3	Lot 5-103(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	1,901		
	Lot 5-103(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	95		
4	Lot 5-104(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	7,581		
	Lot 5-104(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	379		
5	Lot 5-105	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	17		
6	Lot 5-106	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	70		
7	Lot 5-107	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	14		
8	Lot 5-108	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	57		
9	Lot 5-109	33kV Concrete Pole fittings- for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)*	lot/pole	17		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/03/022) *(TSP/04/017-1)*				
10	Lot 5-110	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	70		
11	Lot 5-111	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	14		
12	Lot 5-112	11kV Wooden Pole fittings- for mid span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)*	lot/pole	57		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/06/036-1) *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*				
13	Lot 5-113(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, , D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,281		
	113(b)	LV Stays(c/w stay block and stay accessories)	No	1,140		
14	Lot 5-114(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	9,097		
	Lot 5-114(a)	LV Stays(c/w stay block and stay accessories)	No	4,548		
15	Lot 5-115	Protective Multiple Earthing system *(TSP/06/031-1)*	No	2,371		
16	Lot 5-116	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 9,461 customers**)**				
17	Lot 5-117	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable)	m	189,220		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/05/004)				
18	Lot 5-118	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	18,922		
19	Lot 5-119	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	7,569		
20	Lot 5-120	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	1,892		
21	Lot 5-121	Earth Rod and Clamp *(TSP/06/031-1)*	no	6,623		
22	Lot 5-122	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	19,869		
23	Lot 5-123	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	9,461		
24	Lot 5-124	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	9,461		
25	Lot 5-125	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	6,623		
26	Lot 5-126	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	6,623		
		Others				
27	Lot 5-127	LV Parallel Groove Clamps	No.	9,461		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28	Lot 5-128	50mm2 LV piercing clamps	No.	9,461		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1
Refer to attached annex for detailed construction units
Refer to document number (In brackets) for specifications of each item

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
	Conductors					
1.	Lot 5-201	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	545		
2.	Lot 5-202	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	545		
	LV LINES (474kms of 1 phase 2-wire LV line using 50mm² AA conductor)					
3.	Lot 5-203(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	1,901		
	Lot 5-203(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	95		
4.	Lot 5-204(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	7,581		
	Lot 5-204(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	379		
5.	Lot 5-205	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	17		
6.	Lot 5-206	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	70		
7.	Lot 5-207	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	14		
8.	Lot 5-208	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	57		
9.	Lot 5-209	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole.	17		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
10.	Lot 5-210	33kV Wooden Pole fittings- for mid –span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	Lot/pole	70		
11.	Lot 5-211	11kV Concrete Pole fittings- for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	14		
12.	Lot 5-212	11kV Wooden Pole fittings- for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001)*	lot/pole	57		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 5-213(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, , D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,281		
	Lot 5-213(b)	LV Stays(c/w stay block and stay accessories)	No	1,140		
14.	Lot 5-214(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	9,097		
	Lot 5-214(b)	LV Stays(c/w stay block and stay accessories)	No	4,548		
15.	Lot 5-215	Protective Multiple Earthing system *(TSP/06/031-1)*	no	2,371		
16.	Lot 5-216	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 9,461 customers**)**				
17.	Lot 5-217	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	189,220		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 5-218	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	18,922		
19.	Lot 5-219	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	7,569		
20.	Lot 5-220	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	1,892		
21.	Lot 5-221	Earth Rod and Clamp *(TSP/06/031-1)*	no	6,623		
22.	Lot 5-222	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	19,869		
23.	Lot 5-223	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	9,461		
24.	Lot 5-224	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	9,461		
25.	Lot 5-225	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	6,623		
26.	Lot 5-226	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	6,623		
		Others				
27.	Lot 5-227	LV Parallel Groove Clamps	No.	9,461		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28.	Lot 5-228	50mm2 LV piercing clamps	No.	9,461		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1
Refer to attached annex for detailed construction units
Refer to document number (In brackets) for specifications of each item

Schedule No. 3. Design Services

Carry out Survey, premises picking, customer sensitization, customer data collection, transformer positioning/picking, wayleaves acquisition and detailed design for the following (including design proposals/information updating on the KPLC Facility Data Base (FDB)):

Note: All Tee-offs from three phase transformers shall be in three-phase four-wire for purposes of proper load balancing. Where an existing three phase transformer has single phase t-off, this shall be converted to three-phase four-wire.

Item		Description	Unit	Qty.	Unit Price[1]		Total Price[1]
					Local Currency Portion	Foreign Currency Portion	
				(1)	*(2)*	*(optional)*	*(1) x (2)*
1	Lot 5-305	Low Voltage Line Design(Single Phase / 3 Phase)	km	474			
TOTAL (to Schedule No. 7. Grand Summary)							

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Schedule No. 4. Installation and Other Services

NB: The installation costs should include transport from employer's store to site/ contractor's site store for materials being issued by KPLC

	Item	Description	Unit	Qty.	Unit Price[1]		Total Price[1]	
					Foreign Currency Portion	Local Currency Portion	Foreign	Local
				(1)	*(2)*	*(3)*	*(1) x (2)*	*(1) x (3)*
		Pegging, Holes Digging, Pole erection & dressing, Stay Making and stringing of LV lines; 1-phase 2-wire. (Note : pole dressing shall include all circuit formations for completeness of work.)						
1	Lot 5-407	Pole erection & dressing- Wooden	No	7,581				
2	Lot 5-408	Pole erection & dressing- Concrete	No	1,901				
3	Lot 5-409	Conductor Stringing including trace clearance as per KPLC standard	km	474				
4	Lot 5-410	LV Stay making & Erection	No	5,688				
5	Lot 5-411	PME installation	No	2,371				
6	Lot 5-412	LV line transfer	km	10				
7	Lot 5-413	Recovery of LV wooden pole recovery for re-use	no	50				
8	Lot 5-414	Recovery of Concrete LV pole recovery for re-use	no	50				
		Service Line						
9	Lot 5-415	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	9,461				
10	Lot 5-416	Installation of Ready Boards, Earthing and Testing	No.	6,623				
11	Lot 5-417	Installation of wall mounted metallic customer meter boards complete with MCB and	No	6,623				

		service cable termination						
12	Lot 5-418	As constructed drawings complete with update on KPLC FDB system	Lot	1				
		Other services						
13	Lot 5-419	**Offices facilities :** Provide site office complete with communication facilities	Months	18				
14	Lot 5-420	Provision of Transport Services: Provide transport for KPLC Project Implementation Team for Project supervision and coordination of activities (2 No. 4X4 Vehicles)	Months	18				
15	Lot 5-421	(G. C. C. 7.4): Factory Acceptance Tests for Major Items	Lumpsum	1				
16	Lot 5-422	Customer Account creation, contracting(in InCMS) and issuance of Class C-2 EPRA Wiring Certificates	No.	9,461				
		TOTAL (to Schedule No. 7. Grand Summary)						
					Name of Bidder		_____	
					Signature of Bidder		_____	
		[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1						

Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT *[specify currency]*	VAT Amount
ESHS 1	**Environmental, Social, Health and Safety Management System**	Clause1,2,3,4,5,6, 7, 8 and 9	Lump sum		
ESHS 2	**Protection of the Environment**	Clauses 10,11,12, 13, 14, 15, 16, 17, 18, 19 and 20.	Lump sum		
ESHS 3	**Health & Safety**	Clauses 21,22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37	Lump sum		
ESHS 4	**Local Labour and Relations with Local Communities**	Clauses 38, 39, 40, 41, 42, 43 and 44	Lump sum		
TOTAL (to Schedule No. 7. Grand Summary)				_____	_____
				Name of Bidder……. Signature of Bidder …….	
ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications). Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.					

Schedule No. 6. Recommended Spare Parts

Item	Description	Unit	Qty.	Unit Price		Total Price
			(1)	CIF or CIP (foreign parts) *(2)*	EXW (local parts) *(3)*	*(1) x (2) or(3)*
ST 007	LV Fuse carriers complete with fuses (Various sizes) for transformer LV circuits protection	pcs	60			
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 7. Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
7.	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
8.	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
9.	Total Schedule No. 3. Design Services		
10.	Total Schedule No. 4. Installation and Other Services		
11.	Total Schedule No. 5. Environmental, Social, Health and Safety (ESHS)		
12.	Total Schedule No. 6. Recommended Spare Parts		
	TOTAL (to Bid Form)		

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies

PRICE SCHEDULES - KP1/6E.3/OT/9/22/B02 LOT 6

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		Conductors				
1.	Lot 6-101	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	535		
2.	Lot 6-102	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	535		
		LV LINES (465kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 6-103(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	1,861		
	Lot 6-103(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	93		
4.	Lot 6-104(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	7,441		
	Lot 6-104(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	372		
5.	Lot 6-105	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	17		
6.	Lot 6-106	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	68		
7.	Lot 6-107	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	14		
8.	Lot 6-108	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	56		
9.	Lot 6-109	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	17		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		(TSP/04/017-1)				
10.	Lot 6-110	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole.	68		
11.	Lot 6-111	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	14		
12.	Lot 6-112	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)*	lot/pole	56		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 6-113(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, , D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,233		
	Lot 6-113(b)	LV Stays(c/w stay block and stay accessories)	No	1,116		
14.	Lot 6-114(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	8,929		
	Lot 6-114(b)	LV Stays(c/w stay block and stay accessories)	No	4,464		
15.	Lot 6-115	Protective Multiple Earthing system *(TSP/06/031-1)*	No	2,326		
16.	Lot 6-116	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 9,713 customers**)**				
17.	Lot 6-117	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	194,260		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
18.	Lot 6-118	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	19,426		
19.	Lot 6-119	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	7,770		
20.	Lot 6-120	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	1,943		
21.	Lot 6-121	Earth Rod and Clamp *(TSP/06/031-1)*	no	6,799		
22.	Lot 6-122	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	20,397		
23.	Lot 6-123	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	9,713		
24.	Lot 6-124	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	9,713		
25.	Lot 6-125	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	6,799		
26.	Lot 6-126	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	6,799		
		Others				
27.	Lot 6-127	LV Parallel Groove Clamps	No.	9,713		
28.	Lot 6-128	50mm2 LV piercing clamps	No.	9,713		

Item		**Description**	**Unit**	**Qty.** **(1)**	**CIP Unit Price1 (2)**	**CIP Total Price1 (1) x (2)**
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		Conductors				
1.	Lot 6-201	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	535		
2.	Lot 6-202	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	535		
		LV LINES (465kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 6-203(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	1,861		
	Lot 6-203(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	93		
4.	Lot 6-204(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	7,441		
	Lot 6-204(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	372		
5.	Lot 6-205	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	17		
6.	Lot 6-206	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	68		
7.	Lot 6-207	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	14		
8.	Lot 6-208	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	56		
9.	Lot 6-209	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	17		

Item		**Description**	**Unit**	**Qty.** **(1)**	**CIP Unit Price1 (2)**	**CIP Total Price1 (1) x (2)**
10.	Lot 6-210	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole.	68		
11.	Lot 6-211	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	14		
12.	Lot 6-212	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022)*	lot/pole	56		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		(TSP/04/017-1)				
13.	Lot 6-213(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,233		
	Lot 6-213(b)	LV Stays(c/w stay block and stay accessories)	No	1,116		
14.	Lot 6-214(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	8,929		
	Lot 6-214(b)	LV Stays(c/w stay block and stay accessories)	No	4,464		
15.	Lot 6-215	Protective Multiple Earthing system *(TSP/06/031-1)*	no	2,326		
16.	Lot 6-216	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 9,713 customers**)**				
17.	Lot 6-217	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	194,260		
18.	Lot 6-218	10mm² dropper cable Red and Black; 1m each for single phase meters	m	19,426		

Item		Description	Unit	Qty. (1)	CIP Unit Price1 (2)	CIP Total Price1 (1) x (2)
		(TSP/05/016)				
19.	Lot 6-219	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	7,770		
20.	Lot 6-220	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	1,943		
21.	Lot 6-221	Earth Rod and Clamp *(TSP/06/031-1)*	no	6,799		
22.	Lot 6-222	Earth cable (2.5mm² copper cable) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	20,397		
23.	Lot 6-223	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	9,713		
24.	Lot 6-224	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	9,713		
25.	Lot 6-225	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	6,799		
26.	Lot 6-226	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	6,799		
		Others				
27.	Lot 6-227	LV Parallel Groove Clamps	No.	9,713		
28.	Lot 6-228	50mm2 LV piercing clamps	No.	9,713		
TOTAL (to Schedule No. 7. Grand Summary)						

Item	**Description**	**Unit**	**Qty.** **(1)**	**CIP Unit Price1 (2)**	**CIP Total Price1 (1) x (2)**
			Name of Bidder _____		
			Signature of Bidder _____		

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 3. Design Services

Carry out Survey, premises picking, customer sensitization, customer data collection, transformer positioning/picking, wayleaves acquisition and detailed design for the following (including design proposals/information updating on the KPLC Facility Data Base (FDB)):

Note: All Tee-offs from three phase transformers shall be in three-phase four-wire for purposes of proper load balancing. Where an existing three phase transformer has single phase t-off, this shall be converted to three-phase four-wire.

Item		Description	Unit	Qty.	Unit Price[1]		Total Price[1]
					Local Currency Portion	Foreign Currency Portion	
				(1)	*(2)*	*(optional)*	*(1) x (2)*
1	Lot 6-305	Low Voltage Line Design(Single Phase / 3 Phase)	km	465			
TOTAL (to Schedule No. 7. Grand Summary)							

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Schedule No. 4. Installation and Other Services

NB : The installation costs should include transport from employer's store to site/ contractor's site store for materials being issued by KPLC

	Item	Description	Unit	Qty.	Unit Price[1]		Total Price[1]	
					Foreign Currency Portion	Local Currency Portion	Foreign	Local
				(1)	*(2)*	*(3)*	*(1) x (2)*	*(1) x (3)*
		Pegging, Hole Digging, Pole erection & dressing, Stay Making and stringing of LV lines; 1-phase 2-wire. (Note : pole dressing shall include all circuit formations for completeness of work.)						
1	Lot 6-407	Pole erection & dressing- Wooden	No	7,441				
2	Lot 6-408	Pole erection & dressing- Concrete	No	1,861				
3	Lot 6-409	Conductor Stringing including trace clearance as per KPLC standard	km	465				
4	Lot 6-410	LV Stay making & Erection	No	5,580				
5	Lot 6-411	PME installation	No	2,326				
6	Lot 6-412	LV line transfer	km	10				
7	Lot 6-413	Recovery of LV wooden pole recovery for re-use	no	50				
8	Lot 6-414	Recovery of Concrete LV pole recovery for re-use	no	50				
		Service Line						
9	Lot 6-415	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	9,713				
10	Lot 6-416	Installation of Ready Boards, Earthing and Testing	No.	6,799				
11	Lot 6-416	Installation of wall mounted metallic customer meter boards complete with MCB and	No	6,799				

		service cable termination						
12	Lot 6-416	As constructed drawings complete with update on KPLC FDB system	Lot	1				
		Other services						
13	Lot 6-417	**Offices facilities :** Provide site office complete with communication facilities	Months	18				
14	Lot 6-418	Provision of Transport Services: Provide transport for KPLC Project Implementation Team for Project supervision and coordination of activities (2 No. 4X4 Vehicles)	Months	18				
15	Lot 6-421	(G. C. C. 7.4): Factory Acceptance Tests for Major Items	Lumpsum	1				
16	Lot 6-422	Customer Account creation, contracting(in InCMS) and issuance of Class C-2 EPRA Wiring Certificates	No.	9,713				
		TOTAL (to Schedule No. 7. Grand Summary)						
					Name of Bidder		_____	
					Signature of Bidder		_____	
		[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1						

Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT *[specify currency]*	VAT Amount
ESHS 1	**Environmental, Social, Health and Safety Management System**	Clause1,2,3,4,5,6, 7, 8 and 9	Lump sum		
ESHS 2	**Protection of the Environment**	Clauses 10,11,12, 13, 14, 15, 16, 17, 18, 19 and 20.	Lump sum		
ESHS 3	**Health & Safety**	Clauses 21,22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37	Lump sum		
ESHS 4	**Local Labour and Relations with Local Communities**	Clauses 38, 39, 40, 41, 42, 43 and 44	Lump sum		
TOTAL (to Schedule No. 7. Grand Summary)				_____	_____
				Name of Bidder……. Signature of Bidder …….	
ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications). Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.					

Schedule No. 6. Recommended Spare Parts

Item	Description	Unit	Qty.	Unit Price		Total Price
			(1)	CIF or CIP (foreign parts) *(2)*	EXW (local parts) *(3)*	*(1) x (2) or(3)*
ST 007	LV Fuse carriers complete with fuses (Various sizes) for transformer LV circuits protection	pcs	60			
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 7. Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
7.	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
8.	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
9.	Total Schedule No. 3. Design Services		
10.	Total Schedule No. 4. Installation and Other Services		
11.	Total Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)		
12.	Total Schedule No. 6. Recommended Spare Parts		
	TOTAL (to Bid Form)		

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with scope in Bid Data Sheet under ITB 15.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies

PRICE SCHEDULES - KP1/6E.3/OT/9/22/B02 LOT 7

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		Conductors				
1.	Lot 7-101	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	738		
2.	Lot 7-102	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	738		
		LV LINES (642kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 7-103(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,561		
	Lot 7-103(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	128		
4.	Lot 7-104(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	10,281		
	Lot 7-104(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	514		
5.	Lot 7-105	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	24		
6.	Lot 7-106	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	94		
7.	Lot 7-107	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	19		
8.	Lot 7-108	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	77		
9.	Lot 7-109	33kV Concrete Pole fittings- for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	24		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/04/017-1)				
10.	Lot 7-110	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	Lot/pole.	94		
11.	Lot 7-111	11kV Concrete Pole fittings-for mid span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	19		
12.	Lot 7-112	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)*	lot/pole	77		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 7-113(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	3,073		
	Lot 7-113(b)	LV Stays(c/w stay block and stay accessories)	No	1,536		
14.	Lot 7-114(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	12,337		
	Lot 7-114(b)	LV Stays(c/w stay block and stay accessories)	No	6,168		
15.	Lot 7-115	Protective Multiple Earthing system *(TSP/06/031-1)*	No	3,211		
16.	Lot 7-116	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 12,853 customers)				
17.	Lot 7-117	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	257,060		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 7-118	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	25,706		
19.	Lot 7-119	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	10,282		
20.	Lot 7-120	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,571		
21.	Lot 7-121	Earth Rod and Clamp *(TSP/06/031-1)*	no	8,997		
22.	Lot 7-122	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	26,991		
23.	Lot 7-123	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	12,853		
24.	Lot 7-124	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	12,853		
25.	Lot 7-125	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	8,997		
26.	Lot 7-126	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	8,997		
		Others				
27.	Lot 7-127	LV Parallel Groove Clamps	No.	12,853		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28.	Lot 7-128	50mm2 LV piercing clamps	No.	12,853		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1
Refer to attached annex for detailed construction units
Refer to document number (In brackets) for specifications of each item

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		Conductors				
1.	Lot 7-201	50mm2 AA bare Conductor *(TSP/06/020-2)*	No	738		
2.	Lot 7-202	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	No	738		
		LV LINES (642kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 7-203(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,561		
	Lot 7-203(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	128		
4.	Lot 7-204(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	10,281		
	Lot 7-204(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	514		
5.	Lot 7-205	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	24		
6.	Lot 7-206	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	94		
7.	Lot 7-207	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	19		
8.	Lot 7-208	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	77		
9.	Lot 7-209	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	24		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/04/017-1)				
10.	Lot 7-210	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	94		
11.	Lot 7-211	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	19		
12.	Lot 7-212	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001)*	lot/pole	77		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 7-213(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts,stays, preformed guy-grips, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	3,073		
	Lot 7-213(b)	LV Stays(c/w stay block and stay accessories)	No	1,536		
14.	Lot 7-214(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	12,337		
	Lot 7-214(b)	LV Stays(c/w stay block and stay accessories	No	6,168		
15.	Lot 7-215	Protective Multiple Earthing system *(TSP/06/031-1)*	no	3,211		
16.	Lot 7-216	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 12,853 customers)				
17.	Lot 7-217	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	257,060		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 7-218	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	25,706		
19.	Lot 7-219	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	10,282		
20.	Lot 7-220	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,571		
21.	Lot 7-221	Earth Rod and Clamp *(TSP/06/031-1)*	no	8,997		
22.	Lot 7-222	Earth cable (2.5mm² copper cable) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	26,991		
23.	Lot 7-223	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	12,853		
24.	Lot 7-224	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	12,853		
25.	Lot 7-225	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	8,997		
26.	Lot 7-226	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	8,997		
		Others				
27.	Lot 7-227	LV Parallel Groove Clamps	No.	12,853		
28.	Lot 7-228	50mm2 LV piercing clamps	No.	12,853		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1
Refer to attached annex for detailed construction units
Refer to document number (In brackets) for specifications of each item

Schedule No. 3. Design Services

Carry out Survey, premises picking, customer sensitization, customer data collection, transformer positioning/picking, wayleaves acquisition and detailed design for the following (including design proposals/information updating on the KPLC Facility Data Base (FDB)):

Note: All Tee-offs from three phase transformers shall be in three-phase four-wire for purposes of proper load balancing. Where an existing three phase transformer has single phase t-off, this shall be converted to three-phase four-wire.

Item		Description	Unit	Qty.	Unit Price[1]		Total Price[1]
					Local Currency Portion	Foreign Currency Portion	
				(1)	*(2)*	*(optional)*	*(1) x (2)*
1	Lot 7-305	Low Voltage Line Design(Single Phase / 3 Phase)	km	642			
TOTAL (to Schedule No. 7. Grand Summary)							

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Schedule No. 4. Installation and Other Services

NB : The installation costs should include transport from employer's store to site/ contractor's site store for materials being issued by KPLC

	Item	Description	Unit	Qty.	Unit Price[1]		Total Price[1]	
					Foreign Currency Portion	Local Currency Portion	Foreign	Local
				(1)	*(2)*	*(3)*	*(1) x (2)*	*(1) x (3)*
		Pegging, Hole Digging, Pole erection & dressing, Stay Making and stringing of LV lines; 1-phase 2-wire. (Note : pole dressing shall include all circuit formations for completeness of work.)						
1	Lot 7-407	Pole erection & dressing- Wooden	No	10,281				
2	Lot 7-408	Pole erection & dressing- Concrete	No	2,561				
3	Lot 7-409	Conductor Stringing including trace clearance as per KPLC standard	km	642				
4	Lot 7-410	LV Stay making & Erection	No	7,704				
5	Lot 7-411	PME installation	No	3,211				
6	Lot 7-412	LV line transfer	km	10				
7	Lot 7-413	Recovery of LV wooden pole recovery for re-use	no	50				
8	Lot 7-414	Recovery of Concrete LV pole recovery for re-use	no	50				
		Service Line						
9	Lot 7-415	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	12,853				
10	Lot 7-416	Installation of Ready Boards, Earthing and Testing	No.	8,997				

11	Lot 7-417	Installation of wall mounted metallic customer meter boards complete with MCB and service cable termination	No	8,997				
12	Lot 7-418	As constructed drawings complete with update on KPLC FDB system	Lot	1				
		Other services						
13	Lot 7-419	**Offices facilities :** Provide site office complete with communication facilities	Months	18				
14	Lot 7-420	Provision of Transport Services: Provide transport for KPLC Project Implementation Team for Project supervision and coordination of activities (2 No. 4X4 Vehicles)	Months	18				
15	Lot 7-421	(G. C. C. 7.4): Factory Acceptance Tests for Major Items	Lumpsum	1				
16	Lot 7-422	Customer Account creation, contracting(in InCMS) and issuance of Class C-2 EPRA Wiring Certificates	No.	12,853				
		TOTAL (to Schedule No. 7. Grand Summary)						
					Name of Bidder		_____	
					Signature of Bidder		_____	
		[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1						

Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT *[specify currency]*	VAT Amount
ESHS 1	**Environmental, Social, Health and Safety Management System**	Clause1,2,3,4,5,6, 7, 8 and 9	Lump sum		
ESHS 2	**Protection of the Environment**	Clauses 10,11,12, 13, 14, 15, 16, 17, 18, 19 and 20.	Lump sum		
ESHS 3	**Health & Safety**	Clauses 21,22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37	Lump sum		
ESHS 4	**Local Labour and Relations with Local Communities**	Clauses 38, 39, 40, 41, 42, 43 and 44	Lump sum		
TOTAL (to Schedule No. 7. Grand Summary)				_____	_____
				Name of Bidder……. Signature of Bidder …….	
ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications). Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.					

Schedule No. 6. Recommended Spare Parts

Item	Description	Unit	Qty.	Unit Price		Total Price
			(1)	CIF or CIP (foreign parts) *(2)*	EXW (local parts) *(3)*	*(1) x (2) or(3)*
ST 007	LV Fuse carriers complete with fuses (Various sizes) for transformer LV circuits protection	pcs	60			
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 7. Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
7.	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
8.	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
9.	Total Schedule No. 3. Design Services		
10.	Total Schedule No. 4. Installation and Other Services		
11.	Total Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)		
12.	Total Schedule No. 6. Recommended Spare Parts		
	TOTAL (to Bid Form)		

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies

PRICE SCHEDULES - KP1/6E.3/OT/9/22/B02 LOT 8

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		Conductors				
1.	Lot 8-101	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	573		
2.	Lot 8-102	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	573		
		LV LINES (498kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 8-103(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,001		
	Lot 8-103(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	100		
4.	Lot 8-104(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	7,961		
	Lot 8-104(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	398		
5.	Lot 8-105	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	17		
6.	Lot 8-106	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	73		
7.	Lot 8-107	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	15		
8.	Lot 8-108	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	60		
9.	Lot 8-109	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022)*	lot/pole	18		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/04/017-1)				
10.	Lot 8-110	33kV Wooden Pole fittings-for mid-span pole (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	Lot/pole	73		
11.	Lot 8-111	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole.	15		
12.	Lot 8-112	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001)*	lot/pole.	60		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 8-113(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,401		
	Lot 8-113(a)	LV Stays(c/w stay block and stay accessories)	No	1,200		
14.	Lot 8-114(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	9,553		
	Lot 8-114(b)	LV Stays(c/w stay block and stay accessories)	No	4,776		
15.	Lot 8-115	Protective Multiple Earthing system *(TSP/06/031-1)*	No	2,491		
16.	Lot 8-116	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 9,937 customers)				
17.	Lot 8-117	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	198,740		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 8-118	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	19,874		
19.	Lot 8-119	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	7,950		
20.	Lot 8-120	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	1,987		
21.	Lot 8-121	Earth Rod and Clamp *(TSP/06/031-1)*	no	6,956		
22.	Lot 8-122	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	20,868		
23.	Lot 8-123	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	9,937		
24.	Lot 8-124	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	9,937		
25.	Lot 8-125	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	6,956		
26.	Lot 8-126	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	6,956		
		Others				
27.	Lot 8-127	LV Parallel Groove Clamps	No.	9,937		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28.	Lot 8-128	50mm2 LV piercing clamps	No.	9,937		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		Conductors				
1.	Lot 8-201	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	573		
2.	Lot 8-202	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	573		
		LV LINES (498kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 8-203(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,001		
	Lot 8-203(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	100		
4.	Lot 8-204(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	7,961		
	Lot 8-204(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	398		
5.	Lot 8-205	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	17		
6.	Lot 8-206	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	73		
7.	Lot 8-207	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	15		
8.	Lot 8-208	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	60		
9.	Lot 8-209	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	18		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/04/017-1)				
10.	Lot 8-210	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	73		
11.	Lot 8-211	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)* *(TSP/04/017-1)*	lot/pole	15		
12.	Lot 8-212	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)*	lot/pole	60		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 8-213(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,401		
	Lot 8-213(b)	LV Stays(c/w stay block and stay accessories)	No	1,200		
14.	Lot 8-214(a)	LV Wooden Pole fittings-(Bolts,nuts D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	9,553		
	Lot 8-214(b)	LV Stays(c/w stay block and stay accessories)	No	4,776		
15.	Lot 8-215	Protective Multiple Earthing system *(TSP/06/031-1)*	no	2,491		
16.	Lot 8-216	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 9,937 customers)				
17.	Lot 8-217	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	198,740		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 8-218	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	19,874		
19.	Lot 8-219	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	7,950		
20.	Lot 8-220	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	1,987		
21.	Lot 8-221	Earth Rod and Clamp *(TSP/06/031-1)*	no	6,956		
22.	Lot 8-222	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	20,868		
23.	Lot 8-223	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	9,937		
24.	Lot 8-224	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	9,937		
25.	Lot 8-225	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	6,956		
26.	Lot 8-226	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	6,956		
		Others				
27.	Lot 8-227	LV Parallel Groove Clamps	No.	9,937		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28.	Lot 8-228	50mm2 LV piercing clamps	No.	9,937		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 3. Design Services

Carry out Survey, premises picking, customer sensitization, customer data collection, transformer positioning/picking, wayleaves acquisition and detailed design for the following (including design proposals/information updating on the KPLC Facility Data Base (FDB)):

Note: All Tee-offs from three phase transformers shall be in three-phase four-wire for purposes of proper load balancing. Where an existing three phase transformer has single phase t-off, this shall be converted to three-phase four-wire.

Item		Description	Unit	Qty.	Unit Price[1]		Total Price[1]
					Local Currency Portion	Foreign Currency Portion	
				(1)	*(2)*	*(optional)*	*(1) x (2)*
1	Lot 8-305	Low Voltage Line Design(Single Phase / 3 Phase)	km	498			
TOTAL (to Schedule No. 7. Grand Summary)							

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Schedule No. 4. Installation and Other Services

NB : The installation costs should include transport from employer's store to site/ contractor's site store for materials being issued by KPLC

	Item	Description	Unit	Qty.	Unit Price[1]		Total Price[1]	
					Foreign Currency Portion	Local Currency Portion	Foreign	Local
				(1)	*(2)*	*(3)*	*(1) x (2)*	*(1) x (3)*
		Pegging, Holes Digging, Pole erection & dressing, Stay Making and stringing of LV lines; 1-phase 2-wire. (Note : pole dressing shall include all circuit formations for completeness of work.)						
1	Lot 8-407	Pole erection & dressing- Wooden	No	7,961				
2	Lot 8-408	Pole erection & dressing- Concrete	No	2.001				
3	Lot 8-409	Conductor Stringing including trace clearance as per KPLC standard	km	498				
4	Lot 8-410	LV Stay making & Erection	No	5,796				
5	Lot 8-411	PME installation	No	2,491				
6	Lot 8-412	LV line transfer	km	10				
7	Lot 8-413	Recovery of LV wooden pole recovery for re-use	no	50				
8	Lot 8-414	Recovery of Concrete LV pole recovery for re-use	no	50				
		Service Line						
9	Lot 8-415	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	9,937				
10	Lot 8-416	Installation of Ready Boards, Earthing and Testing	No.	6,956				
11	Lot 8-417	Installation of wall mounted metallic customer meter boards complete with MCB and	No	6,956				

		service cable termination						
12	Lot 8-418	As constructed drawings complete with update on KPLC FDB system	Lot	1				
		Other services						
13	Lot 8-419	**Offices facilities :** Provide site office complete with communication facilities	Months	18				
14	Lot 8-420	Provision of Transport Services: Provide transport for KPLC Project Implementation Team for Project supervision and coordination of activities (2 No. 4X4 Vehicles)	Months	18				
15	Lot 8-421	(G. C. C. 7.4): Factory Acceptance Tests for Major Items	Lumpsum	1				
16	Lot 8-422	Customer Account creation, contracting(in InCMS) and issuance of Class C-2 EPRA Wiring Certificates	No.	9,937				
		TOTAL (to Schedule No. 7. Grand Summary)						
					Name of Bidder		_____	
					Signature of Bidder		_____	
		[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1						

Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT *[specify currency]*	VAT Amount
ESHS 1	**Environmental, Social, Health and Safety Management System**	Clause1,2,3,4,5,6, 7, 8 and 9	Lump sum		
ESHS 2	**Protection of the Environment**	Clauses 10,11,12, 13, 14, 15, 16, 17, 18, 19 and 20.	Lump sum		
ESHS 3	**Health & Safety**	Clauses 21,22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37	Lump sum		
ESHS 4	**Local Labour and Relations with Local Communities**	Clauses 38, 39, 40, 41, 42, 43 and 44	Lump sum		
TOTAL (to Schedule No. 7. Grand Summary)				_____	_____
				Name of Bidder……. Signature of Bidder …….	

ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications).

Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.

Schedule No. 6. Recommended Spare Parts

Item	Description	Unit	Qty.	Unit Price		Total Price
			(1)	CIF or CIP (foreign parts) *(2)*	EXW (local parts) *(3)*	*(1) x (2) or(3)*
ST 007	LV Fuse carriers complete with fuses (Various sizes) for transformer LV circuits protection	pcs	60			
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 7. Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
7.	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
8.	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
9.	Total Schedule No. 3. Design Services		
10.	Total Schedule No. 4. Installation and Other Services		
11.	Total Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)		
12.	Total Schedule No. 6. Recommended Spare Parts		
	TOTAL (to Bid Form)		

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies

PRICE SCHEDULES - KP1/6E.3/OT/9/22/B02 LOT 9

Schedule No. 1. Plant and Mandatory Spare Parts Supplied from Abroad

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		Conductors				
1.	Lot 9-101	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	707		
2.	Lot 9-102	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	707		
		LV LINES (615kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 9-103(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,461		
	Lot 9-103(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	123		
4.	Lot 9-104(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	9,841		
	Lot 9-104(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	492		
5.	Lot 9-105	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	23		
6.	Lot 9-106	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	90		
7.	Lot 9-107	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	18		
8.	Lot 9-108	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	74		
9.	Lot 9-109	33kV Concrete Pole fittings- for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	23		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/04/017-1)				
10.	Lot 9-110	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	90		
11.	Lot 9-111	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	18		
12.	Lot 9-112	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001)*	lot/pole	74		

Item		Description	Unit	Qty. (1)	CIP Unit Price[1] (2)	CIP Total Price[1] (1) x (2)
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 9-113(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,953		
	Lot 9-113(b)	LV Stays(c/w stay block and stay accessories)	No	1,476		
14.	Lot 9-114(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	11,809		
	Lot 9-114(b)	LV Stays(c/w stay block and stay accessories)	No	5,904		
15.	Lot 9-115	Protective Multiple Earthing system *(TSP/06/031-1)*	No	3,076		
16.	Lot 9-116	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 12,849 customers)				
17.	Lot 9-117	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	256,980		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 9-118	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	25,698		
19.	Lot 9-119	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	10,279		
20.	Lot 9-120	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,570		
21.	Lot 9-121	Earth Rod and Clamp *(TSP/06/031-1)*	no	8,994		
22.	Lot 9-122	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	26,982		
23.	Lot 9-123	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	12,849		
24.	Lot 9-124	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	12,849		
25.	Lot 9-125	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	8,994		
26.	Lot 9-126	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	8,994		
		Others				
27.	Lot 9-127	LV Parallel Groove Clamps	No.	12,849		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28.	Lot 9-128	50mm2 LV piercing clamps	No.	12,849		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 2. Plant and Mandatory Spare Parts Supplied from Within the Employer's Country

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		Conductors				
1.	Lot 9-201	50mm2 AA bare Conductor *(TSP/06/020-2)*	km	707		
2.	Lot 9-202	50mm2 PVC insulated AA Conductor *(TSP/06/020-2)*	km	707		
		LV LINES (615kms of 1 phase 2-wire LV line using 50mm² AA conductor)				
3.	Lot 9-203(a)	10M LV Concrete Pole *(TSP/03/005-1)*	No	2,461		
	Lot 9-203(b)	10M LV Concrete Pole(Mid Span Poles) *(TSP/03/005-1)*	No	123		
4.	Lot 9-204(a)	10M LV Wooden Pole complete with Pole Cap *(TSP/03/001)*	No	9,841		
	Lot 9-204(b)	10M LV Wooden Pole (Mid Span Poles) complete with Pole Cap *(TSP/03/001)*	No	492		
5.	Lot 9-205	12M MV Concrete Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	23		
6.	Lot 9-206	12M MV Wooden Poles (33kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	90		
7.	Lot 9-207	11M MV Concrete Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/005-1)*	No.	18		
8.	Lot 9-208	11M MV Wooden Poles (11kV Mid-span Poles for LV crossing) *(TSP/03/001)*	No.	74		
9.	Lot 9-209	33kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, stays, preformed guy- grips, tie-straps, insulators, binding wire etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/04/017-2)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/02/003-3)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	23		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/04/017-1)				
10.	Lot 9-210	33kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	90		
11.	Lot 9-211	11kV Concrete Pole fittings-for mid-span poles (cross arms, Multipurpose/universal clamps, tension plates, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-3) (TSP/02/002) (TSP/06/036-1) (TSP/07/001) (TSP/03/022) (TSP/04/017-1)*	lot/pole	18		
12.	Lot 9-212	11kV Wooden Pole fittings-for mid-span poles (cross arms, bolts, nuts, stays, preformed guy-grips, tie-straps, insulators, binding wire etc) *(TSP/06/035) (TSP/03/021) (TSP/03/003) (TSP/04/017-2) (TSP/02/004) (TSP/02/003-1) (TSP/02/003-2) (TSP/02/002) (TSP/06/036-1) (TSP/07/001)*	lot/pole	74		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
		(TSP/03/022) *(TSP/04/017-1)*				
13.	Lot 9-213(a)	LV Concrete Pole fittings-(Multipurpose/universal clamps, bolts,nuts, D-irons, insulators, etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	2,953		
	Lot 9-213(b)	LV Stays(c/w stay block and stay accessories)	No	1,476		
14.	Lot 9-214(a)	LV Wooden Pole fittings-(Bolts,nuts, D-irons insulators,etc) *(TSP/06/035)* *(TSP/03/021)* *(TSP/03/003)* *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/02/003-2)* *(TSP/02/002)* *(TSP/06/036-1)* *(TSP/07/001)* *(TSP/03/022)*	lot/pole	11,809		
	Lot 9-214(b)	LV Stays(c/w stay block and stay accessories)	No	5,904		
15.	Lot 9-215	Protective Multiple Earthing system *(TSP/06/031-1)*	no	3,076		
16.	Lot 9-216	Materials for LV line transfer (From wooden to concrete poles) *(TSP/03/003)* *(TSP/06/035)* *(TSP/04/011)* *(TSP/02/003-1)*	lot/km	10		
		SERVICE LINES (Service cable to connect 12,849 customers)				
17.	Lot 9-217	Service Cable(10mm2 PVC Insulated Single Phase Concentric Aluminium Cable Without Two Core Copper Communication Cable) *(TSP/05/004)*	m	256,980		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
18.	Lot 9-218	10mm² dropper cable Red and Black; 1m each for single phase meters *(TSP/05/016)*	m	25,698		
19.	Lot 9-219	Service Cable Wooden Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	10,279		
20.	Lot 9-220	Service Cable Concrete Fittings *(TSP/02/004)* *(TSP/02/003-1)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/06/035)*	Lot/Customer	2,570		
21.	Lot 9-221	Earth Rod and Clamp *(TSP/06/031-1)*	no	8,994		
22.	Lot 9-222	Earth cable (2.5mm² copper cable c/w conduit) concealed in a 20mm diameter black conduit soundly fixed on walls *(TSP/05/016)*	m	26,982		
23.	Lot 9-223	Service Cable fittings for wall mounting including Angle Iron *(TSP/02/003-3)* *(TSP/04/011)* *(TSP/03/003)* *(TSP/02/003-1)*	Lot/Customer	12,849		
24.	Lot 9-224	Pole Mounted Meter boards complete with mounting accessories (service cut-out, Din rail, etc) (TSP/14/054)	Lot/Customer	12,849		
25.	Lot 9-225	Ready Boards complete with mounting accessories *(TSP/14/051)*	Lot/Customer	8,994		
26.	Lot 9-226	1ft X 1ft X 3/4ft metallic meter boards (galvanized gauge 30 plain iron sheet) with wall mounting accessories and suitable for meter & MCB mounting, Service cable entry and Earthing.	no	8,994		
		Others				
27.	Lot 9-227	LV Parallel Groove Clamps	No.	12,849		

Item		Description	Unit	Qty. *(1)*	CIP Unit Price[1] *(2)*	CIP Total Price[1] *(1) x (2)*
28.	Lot 9-228	50mm2 LV piercing clamps	No.	12,849		
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Refer to attached annex for detailed construction units

Refer to document number (In brackets) for specifications of each item

Schedule No. 3. Design Services

Carry out Survey, premises picking, customer sensitization, customer data collection, transformer positioning/picking, wayleaves acquisition and detailed design for the following (including design proposals/information updating on the KPLC Facility Data Base (FDB)):

Note: All Tee-offs from three phase transformers shall be in three-phase four-wire for purposes of proper load balancing. Where an existing three phase transformer has single phase t-off, this shall be converted to three-phase four-wire.

Item		Description	Unit	Qty.	Unit Price[1]		Total Price[1]
					Local Currency Portion	Foreign Currency Portion	
				(1)	*(2)*	*(optional)*	*(1) x (2)*
1	Lot 9-305	Low Voltage Line Design(Single Phase / 3 Phase)	km	615			
TOTAL (to Schedule No. 7. Grand Summary)							

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1

Schedule No. 4. Installation and Other Services

NB : The installation costs should include transport from employer's store to site/ contractor's site store for materials being issued by KPLC

	Item	Description	Unit	Qty.	Unit Price[1]		Total Price[1]	
					Foreign Currency Portion	Local Currency Portion	Foreign	Local
				(1)	*(2)*	*(3)*	*(1) x (2)*	*(1) x (3)*
		Pegging, Holes Digging, Pole erection & dressing, Stay Making and stringing of LV lines; 1-phase 2-wire. (Note : pole dressing shall include all circuit formations for completeness of work.)						
1	Lot 9-407	Pole erection & dressing- Wooden	No	9,841				
2	Lot 9-408	Pole erection & dressing- Concrete	No	2,461				
3	Lot 9-409	Conductor Stringing including trace clearance as per KPLC standard	km	615				
4	Lot 9-410	LV Stay making & Erection	No	7,380				
5	Lot 9-411	PME installation	No	3,076				
6	Lot 9-412	LV line transfer	km	10				
7	Lot 9-413	Recovery of LV wooden pole recovery for re-use	no	50				
8	Lot 9-414	Recovery of Concrete LV pole recovery for re-use	no	50				
		Service Line						
9	Lot 9-415	Service cable installation complete with terminations on both the pole and angle iron on the wall, pole mounted meter box, Prepaid meter and MCB installation	No.	12,849				
10	Lot 9-416	Installation of Ready Boards, Earthing and Testing	No.	8,994				

11	Lot 9-417	Installation of wall mounted metallic customer meter boards complete with MCB and service cable termination	No	8,994				
12	Lot 9-418	As constructed drawings complete with update on KPLC FDB system	Lot	1				
		Other services						
13	Lot 9-419	**Offices facilities :** Provide site office complete with communication facilities	Months	18				
14	Lot 9-420	Provision of Transport Services: Provide transport for KPLC Project Implementation Team for Project supervision and coordination of activities (2 No. 4X4 Vehicles)	Months	18				
15	Lot 9-421	(G. C. C. 7.4): Factory Acceptance Tests for Major Items	Lumpsum	1				
16	Lot 9-422	Customer Account creation, contracting(in InCMS) and issuance of Class C-2 EPRA Wiring Certificates	No.	12,849				
		TOTAL (to Schedule No. 7. Grand Summary)						
					Name of Bidder			
					Signature of Bidder			
		[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1						

Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)

Item N°	Description	ESHS Specifications Clause N°	Unit	Amount excluded VAT *[specify currency]*	VAT Amount
ESHS 1	**Environmental, Social, Health and Safety Management System**	Clause1,2,3,4,5,6, 7, 8 and 9	Lump sum		
ESHS 2	**Protection of the Environment**	Clauses 10,11,12, 13, 14, 15, 16, 17, 18, 19 and 20.	Lump sum		
ESHS 3	**Health & Safety**	Clauses 21,22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37	Lump sum		
ESHS 4	**Local Labour and Relations with Local Communities**	Clauses 38, 39, 40, 41, 42, 43 and 44	Lump sum		
TOTAL (to Schedule No. 7. Grand Summary)				_____	_____
				Name of Bidder……. Signature of Bidder …….	

ESHS costs are deemed to cover operations on all Sites (as defined in Clause 1.3 of ESHS Specifications).

Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.

Schedule No. 6. Recommended Spare Parts

Item	Description	Unit	Qty.	Unit Price		Total Price
			(1)	CIF or CIP (foreign parts) *(2)*	EXW (local parts) *(3)*	*(1) x (2) or(3)*
ST 007	LV Fuse carriers complete with fuses (Various sizes) for transformer LV circuits protection	pcs	60			
TOTAL (to Schedule No. 7. Grand Summary)						

Name of Bidder _____

Signature of Bidder _____

Schedule No. 7. Grand Summary

Item	Description	Total Price[1]	
		Foreign	Local
13.	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
14.	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
15.	Total Schedule No. 3. Design Services		
16.	Total Schedule No. 4. Installation and Other Services		
17.	Total Schedule No. 5 – Environmental, Social, Health and Safety (ESHS)		
18.	Total Schedule No. 6. Recommended Spare Parts		
	TOTAL (to Bid Form)		

Name of Bidder _____

Signature of Bidder _____

[1] Specify currency in accordance with specifications in Bid Data Sheet under ITB 15.1. Create and use as many columns for Foreign Currency requirement as there are foreign currencies

Technical Proposal

Technical proposal shall consist of the documents listed below, that shall be submitted with the bid.

- Draft Construction Environmental, Social, Health and Safety Management Plan (Draft Construction ESHSMP)
- Construction Schedule
- Site Organization and Method Statement
- Personnel proposed (forms PER-1 and PER-2)
- Equipment proposed (form EQU)
- Bidder's internal E&S policy document

Draft Construction Environmental, Social, Health and Safety Management Plan (Draft Construction ESHSMP)

This document should focus on the description of the methodology that the Works Contractor intends to implement for:

- Occupational Health and Safety, including gender consideration;
- Labor and working conditions, including women employment and local jobs;
- Waste management, including wooden treated poles and oil management;
- ESHS monitoring and reporting.

Construction Schedule

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

(a) Details of the proposed schedule for obtaining permits that may be necessary in order to commence the Works, including the preparation of required studies, supporting information, and applications;

(b) Details of the proposed timeline for carrying out the Works within the Time for Completion, in the form of a bar chart showing notably the critical path;

(c) Details of the proposed timeline for the testing, commissioning and handing over of the completed Works;

Personnel

Form PER-1: Proposed Personnel

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

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

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

Form PER-2: Resume of Proposed Personnel

Name of Bidder

Position		
Personnel information	**Name**	**Date of birth**
	Professional qualifications	
Present employment	**Name of employer**	
	Address of employer	
	Telephone	**Contact (manager / personnel officer)**
	Fax	**E-mail**
	Job title	**Years with present employer**

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

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

Form EQU: Equipment

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

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment ☐ Owned ☐ Rented ☐ Leased ☐ Specially manufactured	

Omit the following information for equipment owned by the Bidder.

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

Bidders Qualification Forms

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

Form ELI -1.1: Bidder Information Form

Date: *[insert day, month, year]*
IPC No. and title: *[insert IPC number and title]*
Page *[insert total number]* of *[insert total number]* pages

Bidder's name: *[insert full name]*
In case of Joint Venture (JV), name of each member: *[insert full name of each member in JV]*
In case of a JV, Bidder's actual or intended country of Constitution: *[indicate country of Constitution]*
Bidder's actual or intended year of Constitution: *[indicate year of Constitution]*
Bidder's legal address *[in country of Constitution]*: *[insert street/ number/ town or city/ country]*
Bidder's authorized representative information Name: *[insert full name]* Address: *[insert street/ number/ town or city/ country]* Telephone/Fax numbers: *[insert telephone/fax numbers, including country and city codes]* E-mail address: *[indicate e-mail address]*
1. Attached are copies of original documents of ❑ Articles of Constitution (or equivalent documents of association) of the legal entity named above; ❑ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1; ❑ In case of State-owned enterprise or institution, in accordance with ITB 4.3 documents establishing: (a) Legal and financial autonomy; (b) Operation under commercial law; (c) Establishing that the Bidder is not a dependent agency of the Employer; 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Form ELI -1.2: Bidder's JV Information Form

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

Date: *[insert day, month, year]*
IPC No. and title: *[insert IPC number and title]*
Page *[insert total number]* of *[insert total number]*pages

Bidder's JV name: *[insert full name]*
Bidder's JV member's name: *[insert full name of Bidder's JV Member]*
Bidder's JV member's country of Constitution: *[indicate country of constitution]*
Bidder's JV member's year of Constitution: *[indicate year of constitution]*
Bidder's JV member's legal address in country of Constitution: *[insert street/ number/ town or city/ country]*
Bidder's JV member's authorized representative information Name: *[insert full name]* Address: *[insert street/ number/ town or city/ country]* Telephone/Fax numbers: *[insert telephone/fax numbers, including country and city codes]* E-mail address: *[indicate e-mail address]*
1. Attached are copies of original documents of ❑ Articles of Constitution (or equivalent documents of association) of the legal entity named above; ❑ In case of State-owned enterprise or institution, in accordance with ITB 4.3 documents establishing: (a) Legal and financial autonomy; (b) Operation under commercial law; (c) Establishing that the Bidder is not a dependent agency of the Employer; 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

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

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

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
JV Member's Name: *[insert full name]*
IPC No. and title: *[insert IPC number and title]*
Page *[insert page number]* of *[insert total number]* pages

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
❑ Contract non-performance did not occur since 1st January *[insert current year number less 5]* specified in Section III, Evaluation and Qualification Criteria, Sub-criteria 2.1 ❑ Contract(s) not performed since 1st January *[insert current year number less 5]* specified in Section III, Evaluation and Qualification Criteria, Sub-criteria 2.1			
Year	**Non-performed portion of contract**	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and EUR 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 non-performance: *[indicate main reason(s)]*	*[insert amount]*

Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements
❑ No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-criteria 2.3 ❑ Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-criteria 2.3 as indicated below

Year of dispute	**Amount in dispute (currency)**	**Contract Identification**	**Total Contract Amount (currency), EUR Equivalent (exchange rate)**
		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"]* Status of dispute: *[Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]*	*[insert amount]*

Form FIN – 3.1: Financial Situation and Performance

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

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
JV Member's Name: *[insert full name]*
IPC No. and title: *[insert IPC number and title]*
Page *[insert page number]* of *[insert total number]*pages

1. Financial data

Type of Financial information in (currency)	**Historic information for previous** *[insert number] years, [insert in words]* **(amount in currency, currency, exchange rate*, EUR equivalent)**				
	Year 1	Year 2	Year 3	Year4	Year 5
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 Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

*See ITB Clause 15 for the exchange rate

2. Financial documents

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

(a) Reflect the financial situation of the Bidder or in case of a JV, each member, and not an affiliated entity (such as parent company or group member);

(b) Be independently audited or certified in accordance with local legislation;

(c) Be complete, including all notes to the financial statements;

(d) Correspond to accounting periods already completed and audited.

☐ Attached are copies of financial statements[1] for the *[number]* years required above and complying with the requirements

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

Form FIN – 3.2: Annual Construction Turnover

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

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
JV Member's Name: *[insert full name]*
IPC No. and title: *[insert IPC number and title]*
Page *[insert page number]* of *[insert page number]* pages

Annual turnover data (construction only)*			
Year	**Amount** **Currency**	**Exchange rate**	**EUR equivalent**
[indicate calendar year]	*[insert amount and indicate currency]*	*[insert exchange rates used to calculate the EUR equivalent]*	*[insert EUR equivalent]*

* See Section III, Evaluation and Qualification Criteria, Sub-criteria 3.2.

Form FIN – 3.3: Financial Resources

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

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

No.	Source of financing	Amount (EUR equivalent)
1		
2		
3		

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

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

No.	Name of Contract	Employer's Contact Address, Tel, Fax	Value of Outstanding Work [Current EUR Equivalent]	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [EUR/month)]
1					
2					
3					
4					
5					

Form EXP - 4.1: General Construction Experience

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

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
JV Member's Name: :*[insert full name]*
IPC No. and title: *[insert IPC number and title]*
Page *[insert page number]* of *[insert total number]* pages

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

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

* See Section III Evaluation and Qualification Criteria – Sub-criteria 4.1

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

The following table shall be filled in for contracts performed by the Bidder or each member of a Joint Venture and copies of the contracts and completion certificates shall be submitted.

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
JV Member's Name:*[insert full name]*
IPC No. and title: *[insert IPC number and title]*
Page *[insert page number]* of *[insert total number]* pages

Similar Contract No. *[insert number]* of *[insert number of similar contracts required]*	**Information**			
Contract Identification	*[insert contract name and number, if applicable]*			
Award date	*[insert day, month, year, e.g., 15 June, 2015]*			
Completion date	*[insert day, month, year, e.g., 03 October, 2017*			
Role in Contract	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount	*[insert total contract amount in local currency]*		EUR *[insert Exchange rate and total contract amount in EUR equivalent]*	
If member in a JV or sub-contractor, specify participation in total Contract amount	*[insert a percentage amount]*	*[insert total contract amount in local currency]*	*[insert exchange rate and total contract amount in EUR equivalent]*	
Employer's Name:	*[insert full name]*			
Address: Telephone/fax number E-mail:	*[indicate street / number / town or city / country]* *[insert telephone/fax numbers, including country and city area codes]* *[insert e-mail address, if available]*			

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, Evaluation and Qualification Criteria:	
1. Amount	*[insert amount in local currency, exchange rate, EUR in words and in Figures]*
2. Physical size of required works items	*[insert physical size of items]*
3. Complexity	*[insert description of complexity]*
4. Methods/Technology	*[insert specific aspects of the methods/technology involved in the contract]*
5. Construction rate for key activities	*[insert rates and items]*
6. Other Characteristics	*[insert other characteristics as described in Section VII, Works Requirements - Scope of Works]*

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

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
Bidder's JV Member Name: *[insert full name]*
Sub-contractor's Name[1] (as per ITB 34.2 and 34.4): *[insert full name]*
IPC No. and title: *[insert IPC number and title]*
Page *[insert page number]* of *[insert total number]* pages

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

	Information			
Contract Identification	*[insert contract name and number, if applicable]*			
Award date	*[insert day, month, year, i.e., 15 June, 2015]*			
Completion date	*[insert day, month, year, i.e., 03 October, 2017]*			
Role in Contract *[check the appropriate box]*	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
Total Contract Amount	*[insert total contract amount in contract currency(ies)]*		EUR *[insert exchange rate and total contract amount in EUR equivalent]*	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year *[Insert extent of participation indicating actual quantity of key activity successfully completed in the role performed]*	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				

[1] If permitted by the Employer under "specialized works" in Table 4.2 (b) of 4.Qualification of Section III, Evaluation and Qualification Criteria

	Information
Employer's Name:	
Address: Telephone/fax number E-mail:	*[indicate street / number / town or city / country]* *[insert telephone/fax numbers, including country and city area codes]* *[insert e-mail address, if available]*
Description of the key activities in accordance with Sub-criteria 4.2(b) of Section III, Evaluation and Qualification Criteria:	
	[insert response to inquiry indicated in left column]

2. Key Activity No. Two

3. Key Activity No. Three

Form EXP - 4.3
Specific Environmental & Social and Health & Safety Risk Management Experience

Contract No.	**Information**			
Contract Identification	*[insert contract name and number, if applicable]*			
Award date	*[insert day, month, year, e.g, 15 June, 2015]*			
Completion date	*[insert day, month, year, e.g, 03 October, 2017]*			
Role in Contract *[check the appropriate box]*	Prime Contractor ☐	Member in JV ☐	Management Contractor ☐	Sub-contractor ☐
1. Main environmental risks				
2. Main social risks				
3. Main Health and Safety risks				
4. Construction ESMP produced				
5. Key E&S personnel involved				

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

N/A

Form ESHS: Environmental, Social, Health and Safety (ESHS) Documentation

Not Applicable

Form of Bid Security

(Bank Guarantee)

Beneficiary: _____

Invitation for Bids No: _____

Date: _____

BID GUARANTEE No.: _____

Guarantor: _____

We have been informed that _____ (hereinafter called "the Bidder") has submitted or will submit to the Beneficiary its bid (hereinafter called "the Bid") for the execution of _____ under Invitation for Bids No. _____ ("the IFB").

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

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

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

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

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

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

_____*[signature(s)]*

Form of Bid-Securing Declaration

Not Applicable

Section V. Eligibility Criteria

Eligibility in EIB-Financed Procurement

In operations financed by the EIB, tenders are open to nationals of all countries.

Section VI. EIB Policy – Ethical Conduct

It is the EIB's policy to require that promoters, as well as tenderers, contractors, suppliers and consultants under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. The EIB reserves the right to take all appropriate action in order to enforce this policy.

Moreover, the EIB is committed to ensuring that its loans are used for the purposes intended and its operations are free from prohibited conduct (including but not limited to, fraud, corruption, collusion, coercion, and money laundering and terrorist financing). In pursuance of this policy as set out in EIB's Anti-Fraud Policy and within the framework of its exclusion procedures (published in the Bank's website: www.eib.org), the Bank:

- may declare an individual or an entity ineligible to be awarded a contract under any EIB Project or to enter into any relationship with the Bank, if it determines pursuant to its exclusion procedures that such individual or entity has engaged in any prohibited conduct in the course of the procurement process and/or implementation of the contract; and

- may cancel all or part of the Bank financing allocated to a contract for works, goods or services if it, at any time, determines pursuant to its exclusion procedures that an individual or an entity has engaged in any prohibited conduct during the procurement process or during the execution of the contract, without the promoter having taken action satisfactory to the Bank to investigate and/or terminate the prohibited conduct or, as the case may be, remedy the damage.

EIB defines prohibited conduct as:

- Corrupt Practice is the offering, giving, receiving or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party.

- Fraudulent Practice is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation.

- Coercive Practice is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of any party to influence improperly the actions of a party.

- Collusive Practice is an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

- Obstructive Practice is (a) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation; 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 EIB's contractual rights of audit or access to information or the rights that any banking, regulatory or examining authority or other equivalent body of the European Union or of its Member States may have in accordance with any law, regulation or treaty or pursuant to any

agreement into which the EIB has entered in order to implement such law, regulation or treaty;

- Money Laundering is defined in the Bank's Anti-Fraud Policy on the EIB website (www.eib.org)
- Terrorist Financing is defined in the Bank's Anti-Fraud Policy

Covenant of Integrity

The EIB requires:

- Any tenderer for works, goods or services, as a condition of admission to eligibility, to execute and attach to its tender a Covenant of Integrity (CoI) in the form indicated in Section IV; and
- the promoter, the EIB and auditors appointed by either of them, as well as any authority or European Union institution or body having competence under European Union law, to have the right of inspection of the records of the contractor, supplier or consultant in connection with any Bank-financed contract.

PART 2 –WORKS REQUIREMENTS

Section VII. Works Requirements

Contents

SPECIFICATIONS

- Project Information and Technical Specifications
- ESHS Mitigation Measures to be Iimplemented
- Specifications for Environmental, Social, Health and Safety (ESHS) Management of the Works
- Environmental & Social Management Framework

A. Project Information and Technical Specifications

1. Introduction
2. General Scope
    2.1 Detailed Scope
    2.2 Materials to be supplied by employer
    2.3 Detailed Works Description
    2.4 Facilities for Client's Engineer
3. Detailed Technical Specifications
4. Drawings
5. Delivery Locations
6. General Information

1. Introduction

The Government of Kenya has pledged to stimulate economic growth and accelerate job creation to improve the economic wellbeing of Kenyans. Among the many interventions to achieve this is expansion of the power distribution system to be within reach and thus enable more Kenyans connect to the grid at affordable cost and hence initiate economic activities at the micro-economic level.

GoK (Government of Kenya) has already received funding from Africa Development Bank (AfDB) towards connecting approximately 628,400 customers under Phase I & II and the target is 10,640 transformers in the network with over 61,000 transformers. World Bank has also approved funding towards the last mile connectivity project under Phase II to connect 312,500 customers by targeting 3,200 transformers.

Additional funding has been provided by the European Investment Bank (EIB) towards connecting approximately 99,155 customers and the target is 1,653 transformers. EIB is the source of funds for this particular project.

2. General Scope

The project works for this assignment includes Design, Supply, installation, metering and commissioning of last mile electricity service connections.The scope covers: service connection of 99,155 households through the erection of poles, stringing of 4,959 kms of Low Voltage line in $50mm^2$ aluminum conductors (PVC insulated for phase conductors and bare for neutral conductors), installing a total of 1,983 kms of $10mm^2$ aluminum single core concentric cable, installation of 99,155 electronic pre-paid energy meters (including earthing at the customer premise, customer account contracting using InCMS and issuing of statutory wiring documents) and all other associated materials and accessories on turnkey basis for completeness of works.

These are packaged into Nine (9) Lots covering the rural and peri-urban locations in thirty-two (32) counties. Each lot shall be signed as a separate works contract as detailed below.

2.1 Detailed Scope

Lot 1; Connection to the grid of approximately **10,444** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 1	Nakuru, Kericho	• Design, Supply, Installation and Commissioning of 522km of low voltage lines.

Lot 2; Connection to the grid of approximately **14,582** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 2	Nandi, Uasin Gishu, Trans Nzoia, Bungoma, West Pokot	• Design, Supply, Installation and Commissioning of 726km of low voltage lines.

Lot 3; Connection to the grid of approximately **10,413** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 3	Kisumu, Siaya	• Design, Supply, Installation and Commissioning of 519km of low voltage lines.

Lot 4; Connection to the grid of approximately **8,901** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 4	Migori, Homabay, Kisii	• Design, Supply, Installation and Commissioning of 444km of low voltage lines.

Lot 5; Connection to the grid of approximately **9,461** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 5	Vihiga, Busia, Kakamega	• Design, Supply, Installation and Commissioning of 474km of low voltage lines.

Lot 6; Connection to the grid of approximately **9,713** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 6	Narok, Bomet, Nyamira	• Design, Supply, Installation and Commissioning of 465km of low voltage lines.

Lot 7; Connection to the grid of approximately **12,853** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 7	Nyandarua, Iaikipia, Nyeri, Meru, Tharaka Nithi	• Design, Supply, Installation and Commissioning of 642km of low voltage lines.

Lot 8; Connection to the grid of approximately **9,937** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 8	Kitui. Embu, Kirinyaga, Muranga	• Design, Supply, Installation and Commissioning of 498km of low voltage lines.

Lot 9; Connection to the grid of approximately **12,849** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 9	Kajiado, Makueni, kilifi, Kwale	• Design, Supply, Installation and Commissioning of 615km of low voltage lines.

The Contract shall comprise but is not limited to the clearing of all working areas, quality assurance management, design, contracting of customer documents, manufacture, supply, delivery to site, unloading, picking and transportation of meters&MCBs from KPLC stores to site, erection, setting to work, testing at site, commissioning and trial operation, complete in every respect and suitable for reliable operation in the respective environmental and climatic conditions, including and/or adjustment of defective material and workmanship for duration of the Defects Liability period of the distribution lines and transformers described in detail in the Specifications and Schedules. All works not expressly called for in the Specification and/or Schedules but are necessary for the complete and proper supply, erection, operation and maintenance of the Works shall be performed and furnished by the Contractor at no additional cost to the Employers.

Where the new line shares the route with existing lines, the scope of work shall include all the necessary works/modifications that will be required to accommodate the lines along the same route. The hardware/fittings and conductors of the existing lines shall be re-used where necessary.

2.2 Materials to be supplied by the Employer

The Goods supplied by the Employer include are:

- Prepaid Meters and
- Miniature Circuit Breakers (MCBs)

2.3 Detailed Works Description

Design and construction shall be guided by KPLC design and construction (Distribution) manual except where different specific guidelines have been given in this bidding document for specific application to this project.

A detailed descriptions and requirements as to the scope specified is as below:

Design and Scope Confirmation

The Contractor shall carry out technically sound, accurate and timely design work to guarantee sound and robust network construction as well as minimizing excessive material procurement and unnecessary surplus at project completion. In general, the following guidelines apply in this context:

- Design and subsequent construction shall be wayleave friendly to avoid conflicts with landowners and unneccesary wayleave compensations.
- Design work shall incorporate all necessary survey work, Customer premises picking, geo-referencing, obtaining & filling customer information as prescribed in a customer information template and updating of KPLC Facility Data Base (FDB) to ensure all additional network components and new customers are appropriately updated in the system (digitized). At project completion, "As Built Drawings" shall be used to permanently update the FDB system. This shall be a requirement for issuance of a completion certificate.
- Design work shall further include the following:
    - Powerline way leaves acquisition complete with signing way leaves consents with landowners and/or other statutory bodies authorized to sign such consents (in liaison with KPLC wayleaves staff).
    - Sensitizing targeted customers and advising them to carry out timely internal wiring and ensuring wiring is done by electricians registered with Energy and Petrolium Regulatory Authority (EPRA). Where a customer is unable to do electrical installation, the contractor will install a ready board and earthing, test the installation and issue EPRA wiring certificate.
    - Issuing necessary KPLC applications forms to targeted customers and assisting customers to fill them.
    - Collecting the application/supply forms together with other customer data (copy of PIN certificate, Copy of ID, etc.) and submitting the same to KPLC as part of design deliverables.
    - Design work shall involve complete maximization of transformers (within project scope area) ensuring compliance to KPLC's design manual.

- Designs shall ensure that no customer is over-distant (beyond 600 meters electrical distance from the transformer).
- Designs shall ensureVoltage drops are within acceptable limit as per KPLC's design manual
- Designs shall ensure transformers are within acceptable loading levels as per KPLC's design manual and that fuse grading is correct for customer safety.

Note

Failure to comply with the manual and standards herewith instructed would result in defects correction at contractors' cost plus any other contractual consequence.

- Designs shall be approved by the consultant and four (4) physical files be availed to help in supervision (2 files for consultant and 2 files for KPLC). Soft copies of the designs shall also be submitted to the consultant and KPLC for records keeping.
- Each design file shall bear KPLC's Design & Construction System (DCS) reference number and full costing into a Capital Works Authority (CWA) job to facilitate online tracking, DCS wayleaves approval, eventual commissioning in FDB and final capitalization into assets by KPLC.
- The design outcomes are expected to inform the contractor on the quantities to procure for certain materials that are difficult to predict. Of special interests are materials that will be highly influenced by how well project sensitization is done at design stage such as; Ready boards, Metallic meter boards at customer premises (for unprepared customers), earthing materials at customer meter board point etc.
- The contractor shall only be allowed procure a maximum of fifty (50) percent of the materials to be manufactured and delivered before completion of the design process. This provision shall exclude the following:
  - Ready boards
  - Metallic meter boxes
  - Earth Cable (2.5mm2 Cu cable) and associated conduit

Note: These materials/Equipment shall be procured as actuals of the design outcomes.

i. The bill of quantities for Low Voltage (LV) overhead lines

The bill of quantities for Low Voltage (LV) overhead lines will include but not limited to the following :

- Poles or other line support structures and associated materials.

- 50mm² AA conductors (PVC insulated for phase conductors and bare for neutral conductors) and accessories. (All connections shall comprise compression joints as specified in respective terminations/connections specification).
- Protective Multiple Earthing(PME) at every 4th and terminal pole. Earth values must be ≤10Ω. The earthing shall be done using copper clad earth rods. (For Poles without provision of earth mechanism, it is recommended that 25mm2 GSW shall be used and connected to the earth rods using bimetallic clamps).
- Stays and stay blocks.

ii. Bill of Quantities (BQ) for Service Cable and Prepaid Meter Installations.

The bill of quantities for Service cable and prepaid meter installations shall include but not limited to the following:

- Cables and accessories (including angle iron, insulator shackles, D-irons, cable termination on both sides, ready boards and single phase metallic meter boards (where necessary for customer's whose premises are not ready at the time of connection), provision for earthing materials at the customer premise).
- Pole mounted meter boxes and associated accessories (including mounting brackets).
- Prepaid meters(these shall be provided by KPLC)
- Miniature Circuit Breakers (MCBs; these shall be provided by KPLC)
- Customer account creation and contracting using KPLC's InCMS (Integrated Customer Service management System).

Notes:

Earth loop impedance not exceeding 0.001Ω shall be achieved and the statutory wiring documents shall be issued by the contractor hence taking responsibility for customer premise internal wiring soundness

Prepaid meters and MCBs installation inside the pole mounted meter box, asscosiated terminations and sealing of the meter shall be done by the contractor.

2.4 Facilities for the Client/Engineer

a) General

The Contractor shall afford the Employer and his Representatives at a cost deemed to be covered by his Bid price, plant, labour, materials and apparatus as may be required in performing operations in connection with the execution, examination, inspection, and testing of the Works supply:

- Office including full services at a location directed by the Employer/Engineer

- Transport shall be provided, including associated maintenance and repair costs for the vehicles provided.
- Communication facilities for Site Works

The facilities will be purchased from local authorized distributor of the concerned item and the cost shall include all local custom duties and charges. The contractor shall provide full/detailed specifications and supporting documents (catalogues, descriptions and technical documentation) with model/type and product for the evaluation of each item. If the specified type/model of items will not be available at the time of supply the contractor will supply the higher model of the concerned item in its range.

Any plant, equipment or facilities provided shall, unless specified to the contrary, become the property of the client, and shall be required for use solely by the Client and/ Engineer's personnel and shall be handed over in good working order and condition upon completion of the Contract.
The Contractor shall provide all necessary cleaning and maintenance services, including labor, and provide all the required consumable such as, but not limited to water, electricity, cleaning gear and washroom equipment etc.

b) Site Office

The Contractor shall provide for the entire duration of the Contract for the sole use of the Client and Engineer for each lot and at localized area as directed by the Client/ Engineer, fully furnished, complete with all electrical fittings, plumbing and sanitary systems clean and provided with windows to give a sufficient supply of natural light.
The Contractor shall provide for each lot, an office of at least 45m2 in the location advised by the client.
Each office block shall accommodate at least four persons. The office blocks shall be subject to the approval of the Client/ Engineer.
Each office shall be provided with the following equipment for each lot

Item	Description	Quantity
1	Writing desk	4
2	Swivel arm chair	6
3	Filing cabinet for A4 hanging file	1
4	Bookshelves	1
5	Drawing table	1
6	Desktop photocopying machine (A4 size), min 40ppm or above	1
7	Set Window curtains for all windows	1 set

Item	Description	Quantity
8	Desktop Computer, latest model or equivalent	1
9	Laser printer A4, minimum capacity of 40 s/min	1

The Contractor shall provide 24hour security to the office facilities for the entire duration of the Contract.

c) Transport

The Contractor shall provide transport services for use by the employer in site supervision on a 24hour basis, 7 days a week for the entire contract period. The type of vehicle should be a new 4X4 double cab suitable for off-road and site conditions. Each contractor shall provide two (2) vehicles per Lot which shall be delivered within one month after the effective date of the contract.

The cost shall also include provision of:

- An experienced licensed driver who must be having a certificate of good conduct;
- All necessary fuel, lubricant, tools, spares and full maintenance;
- Temporary replacement vehicles for any vehicle under repair or maintenance for more than twenty hours;
- Permanent replacement for vehicles beyond repair or during extensive repair period;
- Insurance and licenses for normal operation on and off site and on and off duty.

d) Test Witnessing

The Client/Engineer has the right to witness factory tests of any equipment included in this bidding document. The Contractor shall bear only costs associated with their staff while KPLC will bear the costs for its own staff for the factory visits for major items/ equipment.

Each consignment of material shall be inspected and tested in the presence of representatives of the Client and the Engineer.

Prior to the tests, the successful bidder shall submit an outline of the procedures and tests in its plans, to demonstrate fulfilment of the requirements specified in subsequent sections of the detailed technical specification.

3. Detailed Technical Specifications

This part of the Specification covers the specific requirements for design, manufacture, work testing, delivery, transport, installation, site testing of 33kV/11kV overhead distribution MV lines and low voltage lines. Design and manufacture of all the line Hardware shall be in accordance with the attached specifications and drawings for the following Items:

No.	ITEM	TITLE	DOCUMENT No.	DATE
1	33/0.420kV Distribution Transformer	Specification for distribution transformer Part 2- Pole Mounted Three Phase Oil Type Transformer specifications	TSP/10/001-2	Issue 5, Rev 1 2015-09-02
2	33/0.242kV Distribution Transformer	Specification for distribution transformer Part 1- Pole mounted Single Phase Oil Type Transformer Specifications	TSP/10/001-1	Issue 5, Rev 0 2015-07-02
3	11/0.420kV Distribution Transformer	Specification for distribution transformer Part 2- Pole Mounted Three Phase Oil Type Transformer specifications	TSP/10/001-2	Issue 5, Rev 1 2015-09-02
4	11/0.242kV Distribution Transformer	Specification for distribution transformer Part 1- Pole mounted Single Phase Oil Type Transformer Specifications	TSP/10/001-1	Issue 5, Rev 0 2015-07-02
5	75mmsq ACSR conductor	Specifications for aluminum conductors steel reinforced Part 2- 75mm2 – 150mm2 Bare and PVC covered	TSP/06/022-2	Issue 2, Rev 0 2015-08-19
6	50MMSQ AA conductor	Specification for all aluminum conductors (Bare & PVC covered) Part 2- without laser marking on center strand	TSP/06/020-2	Issue 3, Rev 0 2013-03-25
7	10mm2 PVC insulated single phase concentric aluminum service cable (Without two core copper communication cable)	Specification for PVC insulated single phase concentric aluminum cables (low voltage)	TSP/05/004	Issue 2, Rev 1 2015-02-18
8	10m concrete poles	Specification for concrete poles- part 1- concrete poles without holes and without joints	TSP/03/005-1	Issue 2, Rev 3 2018-06-29

No.	ITEM	TITLE	DOCUMENT No.	DATE
9	10m wooden poles	Specification for treated wood poles – part 1- Eucalyptus poles	TSP/03/001	Issue 6, Rev 1 2015-02-19
10	11m concrete poles	Specification for concrete poles- part 1- concrete poles without holes and without joints	TSP/03/005-1	Issue 2, Rev 3 2018-06-29
11	11m wooden poles	Specification for treated wood poles – part 1- Eucalyptus poles	TSP/03/001	Issue 6, Rev 1 2015-02-19
12	12m concrete poles	Specification for concrete poles- part 1- concrete poles without holes and without joints	TSP/03/005-1	Issue 2, Rev 3 2018-06-29
13	12m wooden poles	Specification for treated wood poles – part 1- Eucalyptus poles	TSP/03/001	Issue 6, Rev 1 2015-02-19
14	14m concrete poles	Specification for concrete poles- part 1- concrete poles without holes and without joints	TSP/03/005-1	Issue 2, Rev 3 2018-06-29
15	14m wooden poles	Specification for treated wood poles – part 1- Eucalyptus poles	TSP/03/001	Issue 6, Rev 1 2015-02-19
16	Pole signs (Number plates, danger plates, barbed wire)	Specification for safety pole signs accessories	TSP/02/002	Issue 2, Rev 2 2016-03-11
		Barbed wire	no SPEC	
17	Shackle Insulator	Specifications for low voltage insulators – shackle insulators LV	TSP/04/011	Issue 1, Rev 2 2015-05-18
18	Stay wires and guy grips	Specification for stay wires and guy grips	TSP/03/021	Issue 2, Rev 0 2016-06-03
19	Pole Mounted Low Voltage Moulded Case Circuit Breakers (MCCB) in Enclosure	Pole Mounted Low Voltage Moulded Case Circuit Breakers (MCCB) in Enclusure - Specification	TSP/11/043	Issue 1, Rev 0 2017-01-23
20	Aluminum binding wire	Aluminum binding wire - Specification	TSP/06/035	Issue 1, Rev 2 2017-05-10
21	11kV & 33kV composite insulators (Suspension – Tension insulators)	11kV and 33kV composite insulators part 3- suspension-tension insulators for inland applications	TSP/04/017-1	Issue 2, Rev 1 2016-09-02
22	11kV & 33kV composite insulators (pin insulators)	Specification for 11&33kV composite insulators Part 2: Pin type	TSP/04/017-2	Issue 1, Rev 1 2016-08-30
		Specification for 11kV composite pin insulators – coast application	TSP/04/017-3	Issue 2 Rev 0 2016-06-03
23	Aluminum conductor soft drawn	Specification for aluminum conductors (soft drawn)	TSP/06/021	Issue 1, Rev 0 2016-06-03
24	Steel earth wire (Aerial)	Specification for steel earth wire (aerial)	TSP/06/030	Issue 1, Rev 0 2007-08-15

No.	ITEM	TITLE	DOCUMENT No.	DATE
25	Earth rods and their connectors	Specification for earth rods and their connectors part 1: Copper clad earth rods and their connectors	TSP/06/031-1	Issue 3, Rev 0 2014-04-25
26	Line fittings for 10-250mm conductors	Specification for overhead line fittings- part 1: fittings for 10-300mm2 conductors	TSP/06/036-1	Issue 2, Rev 1 2015-09-17
27	Fasteners and washers	Specification for fasteners and washers for overhead lines Part 3-Metal anchors for use in concrete (Rawl Bolts)	TSP/02/003-3	Issue 2, Rev 0 2014-01-19
		Specification for fasteners and washers for overhead lines part 2: screws	TSP/02/003-2	Issue 1, Rev 0 2008-07-22
		Specification for fasteners and washers for overhead lines part 1-Bolts Nuts and washers	TSP/02/003-1	Issue 2, Rev 1 2015-09-17
28	Universal overhead line clamps	Specification for multipurpose overhead line clamps	TSP/02/004	Issue 1, Rev 3 2013-12-05
29	11kV & 33kV expulsion fuse	Specification for 11kV expulsion fuse cut-out (drop out type)	TSP/11/017	Issue 2, Rev 0 2016-06-03
		Specification for 33kV expulsion fuse cut-out (drop out type)	TSP/11/018	Issue 2, Rev 0 2016-06-03
	11kV and 33kV solid links	Specification for 11kV isolator, solid link	TSP/11/015	Issue 2, Rev 1 2013-05-07
		Specification for 33kV isolating link	TSP/11/016	Issue 2, Rev 1 2012-03-01
30	Stay rods	Specification for stay rods and turnbuckles	TSP/03/022	Issue 1, Rev 1 2016-06-03
31	Lugs and connectors	Specification for terminal lugs – compression type	TSP/05/029	Issue3, Rev 0 2015-06-18
32	Ready boards	Specification for end boards for single-phase service connections of single room dwellings and similar premises	TSP/14/051	Issue 2, Rev 0 2015-10-12
33	10mm2 dropper cable, red and black, 1m each for single phase meters	Specification for PVC insulated wiring and auxiliary cables	TSP/05/016	Issue 1, Rev 1 2015-04-09
34	Stay Blocks	Specification for concrete products (hatari slabs & stay blocks)	TSP/07/001	Issue 1, Rev 1 2016-05-31
35	Steel structures	Specification for steel structures for overhead lines	TSP/03/003	Issue 1, Rev 0 2015-08-10
36	Pole Mounted Meter boards complete with mounting accessories	Technical Specifications for Single Phase Pole Mounted MB-ME	TSP/14/054	Issue 1, Rev 0 2009-04-08

No.	ITEM	TITLE	DOCUMENT No.	DATE
37	33kV & 11kV Aerial Bundled Cables (ABC)	11 kV XLPE Aluminium Aerial Bundled Cables (ABC) — Specification	TSP/05/005	Issue 1, Rev 1 2017-10-24
		33 kV XLPE Aluminium Aerial Bundled Cables (ABC) — Specification	As per IEC standard	
38	33kV & 11kV Aerial Bundled Cables (ABC) terminations	Specification for Cold Shrinkable Straight Through Joints and Terminations for 11kV Aerial Bundled Cables	TSP/05/012-3	Issue 1, Rev 0 2013-09-16
		Specification for Cold Shrinkable Straight Through Joints and Terminations for 33kV Aerial Bundled Cables	As per IEC standard	

Note: Standards guaranteeing a level of quality or performance equivalent or superior to those indicated will also be accepted

4. Drawings, Checklists and Construction Templates

- Binding (In arrangement for through Conductors)
- House Termination (Aerial attachment to Buildings)
- LV Intermediate Pole (for angles up to 60^0)
- LV Intermediate Pole (With Tee-off connection)
- Section Pole (For angles over 30^0 and showing 3 or 4 – way arrangement)
- LV Section Pole (for angles up to 30^0)
- LV Termination Pole (With Aerial Cable Connection)
- LV Terminal Pole (With Underground Cable Connection)
- Standard LV Pole Drilling
- Termination for Service Cable
- Overhead Service Line Connection Prepayment Drawing
- LV Intermediate Pole
- LV Section Pole
- LV Terminal Pole
- LV Showing 3-way and 4-way arrangement
- Earthing at the customer premise
- Single line diagram for service cable installation.
- Construction Checklist
- Powerline commissioning form/template
- Inspections and Handing over form/template

Note: Refer to appendices for the listed detailed technical specifications and drawings.

5. Delivery Location

Each of the nine (9) projects (Lots) covers a wide geographical area. The listing below gives general information on KPLC's administrative Regions covered by each project for general guidance only.

- Central Rift - KP1/6E.3/OT/9/22/B02 Lot 1
- Western/North Rift - KP1/6E.3/OT/9/22/B02 Lot 2
- Western - KP1/6E.3/OT/9/22/B02 Lot 3
- South Nyanza - KP1/6E.3/OT/9/22/B02 Lot 4
- Western - KP1/6E.3/OT/9/22/B02 Lot 5
- Central Rift/South Nyanza - KP1/6E.3/OT/9/22/B02 Lot 6
- Central Rift/Mt Kenya- KP1/6E.3/OT/9/22/B02 Lot 7
- Mt. Kenya/North North Eastern - KP1/6E.3/OT/9/22/B02 Lot 8
- Nairobi West/Nairobi South/Coast - KP1/6E.3/OT/9/22/B02 Lot 9

6. Service connections

Service connections are the link between the LV network and the consumers. The meters shall be of single phase type.

The low voltage service connections include the supply and work:

The prepayment meter comprises of two detached parts, namely, the MCU, and the CIU (UIU).

MCU: Part of the split prepayment meter that does all the metrology functions including the storage of energy used and display of remaining units.

CIU: Part of the split prepayment meter that does the meter display function and also allows keying of electricity token.

It should be noted that all meter boards must be installed outside the customer's premises so as to facilitate ease of access by Kenya Power personnel and to also prevent bypassing of the meters.

Customers will be supplied via a cable connected from an LV line at pole. The prepaid meter shall be installed at a meter board mounted on the pole.

7. Units of measurement and governing dimensions

All documents shall be prepared, and all Works shall be carried out using SI (System International) units of measurement with the sole exception of manufactured components not readily available in the SI units.

Dimensions in the Imperial System may be added in brackets following the Metric dimensions. The Governing dimensions to which the equipment shall be designed are as shown on the drawings.

8. Basic standards

The equipment, materials and labour employed in the fabrication, delivery, erection or installation and testing of the parts of the project shall comply with applicable and approved standards. The principal basis for reference shall be the appropriate portions of the latest revision of internationally recognized standards.

9. Inspections and tests during manufacture

As far as practicable, quality of material, workmanship and performance of all items of the equipment furnished under the present Contract shall be inspected at the places of manufacture by the Contractor's QC inspectors and, if so laid down, by the inspectors representing the Employers and the Engineer.

Equipment shall wherever practical be subject to tests on completion in the Manufacturer's Works to prove that the reliability, operation and performance conforming to the requirements of this Specification and the provisions of the appropriate standards.
Every facility is to be provided by the Contractor to enable the Employers and the Engineer to carry out the necessary inspection of the equipment components and the costs of all tests during manufacture and preparation of test records are to be borne by the Contractor.

The Contractor shall on request submit for approval procedures describing the proposed test methods to be used. Type and layout of test facility, location of instrumentation, formula for calculation of results and correction to Site conditions, etc. shall be included where appropriate.

All instruments and apparatus required for the inspection or used for the performance of tests shall be calibrated to an agreed standard at a laboratory of National standing. The cost of making such calibrations shall be borne by the Contractor in all cases. Records shall be available for examinations by the Employers/Engineer or his Representative.

The passing of the inspection test will not, however, prejudice the right of the Employers/Engineer to reject the equipment components if they do not comply with the Specification when erected, or given complete satisfaction in service.

Where the Contractor desires to use stock material, not manufactured specifically for the work, satisfactory evidence that such material conforms to the requirements of the Contract shall be submitted. In this case tests on these materials may be waived, but certificates are to be submitted. Arrangements shall be made for expediting the shop inspection by having all shop assemblies or pieces covering a single shipment ready at one time. Any packing work as well as transport to the Site of the equipment concerned shall not be started before the approval of the Employers/Engineer has been obtained and all QC certificates due at this time for the equipment concerned have been received and reviewed by the Employers/Engineer.
The Test Objects and the tests to be carried out as detailed in the attached specifications for each item.

10. Packing

The Contractor shall prepare, pack, and load all materials and equipment for shipment in such a manner that they are protected from damage during shipment and shall be responsible for and make good any and all damage resulting from improper packing until final acceptance of the Works. Items subject to open storage for several months at the sites shall be suitably protected from weather damage. All electrical parts and mechanical parts subject to damage from moisture shall be packed together with an appropriate quantity of desiccant in hermetically sealed metal containers, plastic envelopes, or other appropriate containers, with all machined surfaces heavily coated with rust preventing compound.

Each case, crate, bundle, or single item shall be marked clearly with the name of the installation for which it is intended. Each container shall be clearly marked and the contents identified for proper warehousing.

The Contractor shall take all necessary precautions to ensure that all materials, which may be subject to deterioration in humid tropical conditions, are packed in such a manner as to prevent such deterioration.

All parts shall be carefully boxed or otherwise suitably prepared for shipment to a tropical climate. All openings shall be tightly closed before shipment. Equipment that will be vulnerable to damage due to seawater or moisture during transportation or storage at the Site shall be protected by a suitable vapour barrier and, if considered necessary by the Engineer, by an internal atmosphere of inert gas or approved desiccant.

All parts exceeding 100 kg gross weight shall be prepared for shipment so that slings for handling by crane may be readily attached while the parts are on railway cars or on board ship. The Contractor shall paint or mark the weight of all pieces in excess of 5 tonnes.

The Contractor shall take necessary measures to avoid ingress of moisture during transportation, storage and installation.

The Contractor shall bear the risk of loss or damage to material prior to and including off loading on the dock at the port of entry.

11. Drum handling instructions

Following instructions should be followed for handling conductor drums:

- Generally, conductor ends should be available for inspection and testing.
- During unloading operation drums must not be thrown or dropped from a height, from wagons, trucks and ships. A ramp or crane may be used for unloading operation. If neither is available a temporary ramp may be arranged.
- The drums should be rolled only the way arrow mark on the drum is shown. If it is rolled the other way the cable will start unwinding and will become loose.
- The drums should be stored on a firm surface, preferably on concrete surface. Storage of drums on a soft surface may result in drums sinking, making it extremely difficult to move the drums later.
- The drums should never be stored flat i.e. the flanges being kept horizontal to the ground. The cables should also never be wound from this position. Unwinding of cable from this position may result in the cable getting twisted which is not rectifiable.

If for some reason it is necessary to rewind the cable on a different drum, the barrel of the new drum should not be less than the existing drum.

12. Packing list

The contents of each shipping package shall be itemised on a detailed list showing the exact weight, extreme outside dimensions, length, width, and height of each container. If all containers are uniform in size and weight, the dimensions and weight of only one may be shown.

One copy of the detailed packing list shall be enclosed in each package delivered. There shall also be enclosed in one package a master packing list summarizing and identifying each individual package which a part of the shipment is.

The box number in which the master packing list is contained should be shown on each packing list. On barrels, bags, drums, or kegs where it is not feasible to place the packing list inside the container, all pertinent information is to be stenciled on the outside and this will thus constitute a packing list.

13. Submission of drawings

Drawings shall be submitted to the Employers for approval one (1) months prior to the date on which they will be required at the manufacturer's works, to ensure that the work is carried out in compliance with the program of Works.
The Engineer, for approval of all design calculations and drawings, requires a minimum period of 28 days.
Before commencing the manufacture, the Contractor shall submit to the Employers, for approval, four copies of prints of drawings in sufficient detail to show:

- The general arrangement and outline of dimensions of the parts to be supplied under the Contract;
- On detail drawings, the weights of components over one tonne to be shipped separately;
- The material specifications from which the various parts are to be made and their machined surface finished;
- The welding details and machining and assembly tolerances of all assemblies;
- The manner in which such parts are designed to function;
- Diagrams, performance curves and catalogue numbers of all electrical and mechanical equipment.

The Contractor shall submit to the Engineer, for approval, all drawings and technical documents as follows:

	Prints	Electronics copy (CD)
For approval		
Calculations and drawings	4	1
As-built drawings	2	1
Other documents	2	1
Supervision formats	2	1
Commissioning procedures	2	1
For Final issue		
Calculations and drawings	3	1
As-built drawings	3	1
Other documents	3	1
Supervision formats	3	1
Commissioning procedures	3	1

14. Site Installation and Commissioning

The Contractor shall ensure that all Site installation and commissioning controls, inspections and tests, are carried out in accordance with the planned program, and that data recorded are adequate to permit the Engineer to verify that the whole of the Contract Works are in full compliance with all Contract requirements.

15. Inspection and Testing

The Contractor shall ensure that measures are established for all material and items that will provide the ability, at any point of manufacture, to determine that the manufacturer's planned inspections and tests up to that point have been carried out.

Detailed foundation records shall include depth and details of the foundation, soil description, etc.

16. Measurement and Payment

The quantities in the Schedule of Prices are estimated quantities, and they are not to be considered as limiting or extending the amount of work to be done by the Contractor.

The measured items in the Schedule of Prices are to be accepted as the full interpretation of the requirements of the Technical Specifications and Drawings.

17. General Information

This section furnishes the Contractor with pertinent information and data to provide a better understanding of working conditions. Notwithstanding this information, however, the Contractor is obliged to make independent inquiries as to the scope of work and to base the work on reliable data concerning hydrological, physical and climatic conditions of the Site. The Contractor shall have satisfied himself as to the true nature of the ground and subsoil, the form and nature of the sites and the work, the means and access to the sites, the construction camps and accommodation which might be required and, in general, shall have obtained all necessary information as to risks, contingencies and other circumstances which may influence the work.

B. ESHS MITIGATION MEASURES TO BE IMPLEMENTED

Introduction

Mitigation measures involve avoiding of impact altogether, minimizing the impact, rectifying the impact and gradual elimination of impact over time. Mitigation measures are three: physical, socio-cultural and socio-economic. Physical measures relate to issues of project siting, re-vegetation and preventive measures to minimize bush clearing, erosion, sedimentation and pollution control and good construction /engineering design practices, waste management, and application of Environmental Guidelines for Contractors. Socio-economic measures will include education and awareness, hygiene and sanitation training, rules and regulations, institutional support (including skills training), and recruitment of qualified personnel while socio-cultural measures could include allowing limited and monitored access to restricted areas for cultural reasons where applicable.

The mitigation measures for the public health issues; explore options to accommodate crew off site and avoid camps and in absence of that, educate the crew about preserving vegetation, provide decent temporary sanitation facilities like toilets. Use local and regional labour as much as possible and provide HIV/AIDS awareness training to the workers and the community, provide guidelines on local culture, behavior and social life to the workers and create walk ways and plant grass where necessary.

The mitigation measures for use of hazardous waste include; use off site treatment methods and only deliver poles ready for fixing, proper burning or disposal of any hazardous materials found on site, use protective gear during work, remove or bury all abandoned construction materials and rubbles and fill in and close all latrines and septic systems. The mitigation measures for use of heavy plant and equipment i.e. tippers for material delivery include; Minimize the use of heavy trucks, Provision of drainage channels to guide surface run offs and introduction of mulching to minimize effects on soil erosion and set protocols for vehicle maintenance on site and not dump any oil around the site.

A summary of potential environmental and social impacts and the corresponding general mitigation measures for the types of activities likely to be undertaken by KPLC during the implementation of AFD/EU/EIB LMCP are as shown in Table below. The tables are not intended to be exhaustive in content but rather to indicate in general the scope of ESMPs. It is entirely possible that additional impacts will be identified during screening process and will require additional mitigation measures. In the ESMPs, impacts shall be categorized according to project phase (planning, design and construction) and for all project types.

ENVIRONMENTALLY SENSITIVE ECOSYSTEMS, RISKS AND MITIGATION MEASURES ACROSS THE 32 PROJECT COUNTIES

No.	County	Land Types/Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystems	Mitigation Measures	Responsibility
1.	Nandi	King'wal Swamp	Cutting down of tree cover	Low (There could be likelihood of lines crossing or being in proximity to swampy areas)	Clear only necessary vegetation	Contractor
			Damage to crops and trees		Compensate	KPLC

No.	County	Land Types/Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystems	Mitigation Measures	Responsibility
			Electrocution of migratory birds		Use insulated conductors	Contractor
			Falling of energized power lines on the wetland		Avoid Wetlands, Use concrete poles	Contractor
			Soggy grounds		Avoid Soggy grounds, Use concrete poles	Contractor
		River Kesses River Mokong	Falling of poles	Low (There could be likelihood of lines crossing or being in proximity to rivers)	Site the poles on stable grounds for ease of access and stable installation	Contractor
			Rugged terrains			
2.	Uasin Gishu	Planted and natural forest covers i.e. Nabkoi, Timboroa, Sangalo, Lorenge, Kipkurere and Kapsaret	Cutting down of trees Electrocution during pruning of branches	Nil (gazetted forests not settled)	Avoid gazetted forests	Contractor
		River Moiben and its 3 tributaries River Sosiani with its 3 tributaries River Sergoit with 2 tributaries River Kipkaren with 9 tributaries River Nzoia	Falling of poles thus electrocution caused by energized lines Electrocution of bird species that are indigenous to the area Soggy grounds	Low (There could be likelihood of lines crossing or being in proximity to rivers)	Route the lines on stable grounds away from river buffers Consult local communities and relevant authorities to ensure that areas chosen for routing lines are not habitats for indigenous bird species	Contractor
3.	Trans Nzoia	Cherengany Hills catchment Mt Elgon Catchment	Bird electrocution Cutting of trees	Nil (gazetted forests not settled)	Do not route the power lines across or adjacent to the catchment areas as they are internationally recognized important bird areas and have been gazette Mt Elgon and Cherengany hills have dual are also gazetted as a national park and conservancy respectively thus minimizing human impacts on the environments. As such line construction should not be done within the areas The Mt Elgon and Cherengany hills ecosystems are home to indigenous tree species that take long to grow when cut this construction of the lines should aim at preserving the environment in its natural state.	Contractor

No.	County	Land Types/Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystems	Mitigation Measures	Responsibility
		River Nzoia and River Suam	Falling of poles Rugged terrains Electrocution from fallen energized lines	Low (There could be likelihood of lines crossing or being in proximity to rivers)	Being the main perennial rivers flowing through the county into Lake Victoria and Lake Turkana respectively, their ecosystems provide suitable breeding grounds for wildlife thus construction of electric lines within such ecosystems will interfere with the habitats, thus the lines need to be constructed on safer environments upon consultation with local communities and relevant authorities to ensure the development do not interfere with natural wildlife habitats.	
			Electrocution of birds		Where areas traversed by lines are known or considered flight paths then the lines have to be insulated appropriately	
4.	Bungoma	River Sio and Lwakhakha-Malaba-Malakisi River	Birds electrocution Soggy grounds Falling poles	Low (There could be likelihood of lines crossing or being in proximity to rivers)	After consultation with local communities route the lines on suitable environment away from birds' habitat and on stable grounds to minimize chances of poles falling.	Contractor
			Cutting of trees		Avoid areas with dense vegetation covers especially with indigenous tree species	
5.	West Pokot	River Suam River Weiwei River Kerio and River Muruny	Rugged terrain Soggy grounds Falling poles Top soil erosion	Low (There could be likelihood of lines crossing or being in proximity to rivers)	Consider routing the lines on gently sloping terrains for stability of lines and minimal soil erosion	Contractor
		Cherengany Hills to the southern side	Rugged Terrains		Route the lines on gently sloping terrains	

No.	County	Land Types/Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystems	Mitigation Measures	Responsibility
			Cutting of trees		The routes considered for establishment of lines should be along areas with minimal vegetation covers especially of indigenous tree species	
			Electrocution of birds		Insulate lines especially along the birds flight routes	

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
6	Kisumu	Railway Forest	Cutting of trees. Not within Project footprint	Nil (Protected area).	Avoid Protected areas.	Contractor
		Kisumu Impala Sanctuary, Ruma National Park	Animal electrocution	Nil (Protected area).	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions	Contractor
		Lake Victoria, River Nyando	Soggy ground, bird electrocution	Low (There could be likelihood of lines crossing rivers)	Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
7	Siaya	River Yala, Yala swamp, Lake Kayabol	soggy ground, bird electrocution	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor
		Got Ramogi Forest	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Nil (Protected area).	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas. Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor
8	Vihiga	Kaimosi Forest	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Nil (Protected area).	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas. Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor
		Isara River, Musikolo River, River Wandende, River Wasundi	falling of poles causing electrocutions	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	do not site poles and power lines on the riparian lands, Use insulated cables to avoid bird electrocution	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
9	Kakamega	Kakamega Forest National Reserve	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Nil (gazetted forests not settled)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas. Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor
		Isiukhu river	falling of poles causing electrocutions	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	do not site poles and power lines on the riparian lands, Use insulated cables to avoid bird electrocution	Contractor
10	Busia	River Malaba, River Nzoia, River Sio, Nabubolu stream, River Manyanja	soggy ground, bird electrocution	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor

No.	County	Land types/ Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
11 and 12	Homabay and Migori	Nyando River Delta	Falling power lines due to Soggy grounds	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Use Concrete poles, avoid swampy areas	Contractor
			Corrosion		Ensure all metallic parts are anti-corrosive	Contractor
			Risk of flash floods		Take precaution if working in flood prone areas, don't site poles along flood prone areas	Contractor
		Lake Victoria	Falling power lines due to Soggy grounds	Low (There could be a likelihood of lines being in proximity to the lakeshores)	Use Concrete poles, avoid swampy areas	Contractor
			Corrosion		Ensure all metallic parts are anti-corrosive	Contractor

No.	County	Land types/ Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
			Risk of flash floods		Take precaution if working in flood prone areas, don't site poles along flood prone areas	Contractor
		Forested areas	Tree cutting	Low (Sparse settlements near forested areas)	Avoid forested areas.	Contractor
			Forest Fires		Avoid careless handling of open fires.	Contractor
			Bird Electrocutions		Use insulated cables in habitats with brown crested cranes	Contractor
		Hills: Maeta, Magaimuya and Taragwiti Hills	Falling lines due to Steep landscape, unstable grounds and soil erosion	Low (Sparse settlements near the hills)	Protected areas not settled, in steep landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor
		Islands: Ngodhe and Takawiri	Noise pollution due to use of Compressors in Rocky landscape	Nil (Not within the grid network)	Not within the grid network	Contractor
		Bala Hot Springs	Burns due to Eruptions and risk of falling lines due to wet grounds	Nil (Area not settled)	Complete avoidance Bala hot springs areas	Contractor
		Cultural Shrines: Mawanga and Kwitone Rock Art	Threat to preservation of cultural heritage		Avoid cultural places	Contractor
13 and 14	Kisii and Nyamira	Sironga Wetland	Falling power lines due to Soggy grounds	Low (There could be likelihood of lines crossing or being in proximity to swampy areas)	Use Concrete poles, avoid swampy areas	Contractor
			Corrosion		Ensure all metallic parts are anti-corrosive	Contractor
			Risk of flash floods		Take precaution if working in flood prone areas, don't site poles along flood prone areas	Contractor
		Nyangweta Forest	Tree cutting	Nil (gazetted forests not settled)	Avoid forested areas.	Contractor
			Forest Fires		Avoid careless handling of open fires.	Contractor

No.	County	Land types/ Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Hills: Sameta, Taracha, Nyacheki, Nyangweta, Kiong'anyo Kiabonyoru, Nyabisimba, Nkoora, Kemasare and Manga.	Risk of falling lines due to unstable grounds on Steep landscape	Low (Sparse settlements near the hills)	Protected areas not settled, in steep landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor
		Manga ridges	Risk of falling lines due to unstable grounds on Steep landscape	Low (Sparse settlements near the hills)	Protected areas not settled, in steep landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor
		River Gucha catchment (Kiabonyoru)	Falling power lines due to Soggy grounds	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Use Concrete poles, avoid swampy areas	Contractor
15	Bomet	Mara River Basin	Falling power lines due to Soggy grounds	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Use Concrete poles, avoid swampy areas	Contractor
			Corrosion		Ensure all metallic parts are anti-corrosive	Contractor
		Mau Forest	Tree cutting	Nil (gazetted forests not settled)	Avoid forested areas.	Contractor
			Forest Fires		Avoid careless handling of open fires.	Contractor
		Motigo Hills	Steep landscape	Low (Sparse settlements near the hills)	Protected areas not settled, in steep landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
16	Narok	Mau Forest, Olposimoru and Transmara Forests	Cutting down of trees	Nil (gazetted forests not settled)	Do not connect people residing illegally in the forest	Contractor
		Mara River, Ewaso Nyiro River	Falling of poles causing electrocutions	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Do not site poles and power lines on the riparian lands, Use insulated cables to avoid bird electrocution	Contractor
		Maasai Mara Game Reserve	Animal electrocution	Nil (Not within the project scope area)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes.	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	
17	Nyandarua	Aberdare Forest, Ol Bolosat, Magumu North, Magumu South, Muruai, Kirima Forests	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Nil (gazetted forests not settled)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas. Use Concrete poles in soggy grounds, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor
		lake Ol Bolosat, Ewaso Nyiro River, Malewa River	Soggy grounds leading to rotting of poles, risk of bird electrocution,	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Use Concrete poles, Use insulated conductors	Contractor
		Aberdare Ranges	Rugged landscape	Low (Sparse population at the edges)	Protected area not settled.	
18	Nakuru	Lakes: Nakuru, Naivasha and Elementaita.	soggy ground, bird electrocution,	Low (Sparse population near the lake shores)	Use Concrete poles, Use insulated conductors	Contractor
		Lake Nakuru National Park, Hells Gate National Park	Human-wildlife conflict, Struggling and Electrocution of giraffes in dispersal areas	Nil (Area not settled)	Protected area not settled. In dispersal areas settled, any power lines should be straight to reduce stays and use insulated conductors	Contractor
		Forests: Eburu Forest, Bahati, Eastern Mau, Eburu, Eastern Mau, Kijabe Hill, Mau Narok, Menengai, West Molo	cutting down of trees	Nil (gazetted forests not settled)	Protected areas not settled. Any illegal inhabitants should not be connected to the grid.	Contractor
		Hills: Hyrax Hills and Ndiuni Hills	Rugged landscape	Low (Sparse population near the foot of the hills)	Site poles in stable grounds, apply soil erosion reduction measures	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Swamps: Barina Swamp	Soggy ground, bird electrocution	Low (There could be likelihood of lines crossing or being in proximity to swampy areas)	avoid constructing power lines on swamps. If absolutely necessary use extra-long concrete poles to increase pole spacing and use insulated conductors	Contractor
19	Laikipia	Forests: Mukogodo, Lariak, Marmanet, Ng'arua, Rumuruti and Shamaneik	Tree cutting to allow for power line wayleave, Trees falling on the power lines , Electrocution of wild animals	Low (Sparse population proximal to forested areas)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Contractor
		Rivers: Ewaso Narok (Ngare Naro), Narumoru, Likii, Sirimon, Ontulili, Ngare Ndare, Melwa, Ngare Nything, Ngobit, Rongai, Timau, Moyak, Pesi, Suguroi, Mutara, Nanyuki, and Burguret Rivers.	Falling of power lines due to loose soil	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Site the poles away from the riparian reserve	Contractor
20	Nyeri	Forests: Aberdare Ranges, Mt. Kenya, Karima Hill, Tumutumu Hill, Gachirichiri, Wagere, Karundu, Karindi, Thangathi, Ngamwa Hilltop and Gachuthe	NOT within the project footprint since they are protected areas and considered sacred by the locals	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Contactor
21	Kericho	Mau Forest -it is inhabited by a minority group called the Ogiek who are hunters/ gatherers. Also Tindiret Forest and Londiani Forest	Tree cutting to allow for power line wayleave, Trees falling on the power lines, Electrocutions	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Contactor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Rivers: Chemosit, Mara Mara, Itare, Kipsonoi and Timbilil	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Avoid the riparian reserves	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
22	Meru	Lake Nkunga- within Imenti Forest and surrounded by natural springs. Also Lake Ellis	NOT within the project footprint since they are protected area and considered sacred by the locals	Nil (Protected area not settled)	The power lines should be out of this ecosystem	Contractor
		Swamps/ Wetlands: Mbutubutia (Tigania West), Baisigiria (Buuri), Ithindi (Igembe Central), Mporoko (Igembe South), Rurie (Imenti Central)	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing or being in proximity to swampy areas)	Erect electricity poles outside the swamps and the wetlands	Contractor
		Rivers: Kathita, Mariara, Thingithu, Kithino, Ura, Thangatha, Mutonga, Thanantu, Iraru, Rujiweru, Kathangatha	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Put the power lines out of the riparian reserve	Contractor
		Forests: Tamani Forest, Kirimachuma forest, Nguthiru Laingo Forest, Mt Kenya Forest, Nyambene Forest and Imenti Forest	NOT within the project footprint since they are protected forests	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Contractor
		Rivers: Sagana, Nyamindi, Rupingazi, Thiba, Rwamuthambi and	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in	Put the power lines out of the riparian reserve	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Ragati, which ultimately drain into the Tana River.		proximity to swamps)		
		River Mathioya	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Put the power lines out of the riparian reserve	Contractor
23	Kirinyaga	Forests: Mt. Kenya, Njukiini West, Murinduku, Kariani, Kamaruana, Karimandu and Kerugoya Urban forest	NOT within the project footprint since they are protected forests	Nil (gazetted forests not settled)	The power lines should avoid forests.	Contractor
		Rivers: Sagana, Nyamindi, Rupingazi, Thiba, Rwamuthambi and Ragati, which ultimately drain into the Tana River.	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Put the power lines out of the riparian reserve	Contractor
		River Mathioya	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Put the power lines out of the riparian reserve	Contractor
24	Murang'a	Forests: Gatare, Karua, Kimakia, Kiambicho and Wanjerere	Tree cutting to allow for power line wayleave, Trees falling on the power lines , Electrocution of wild animals	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used	Contractor
		River Mathioya	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Put the power lines out of the riparian reserve	Contractor
25	Tharaka Nithi	Forests: Mt. Kenya, Chogoria and Chuka Forest station	NOT within the project footprint since they are	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
			protected area and considered sacred by the locals		not possible to avoid forests, insulated power lines will be used.	
26	Embu	Forests: Mulinduko, Maranga	Tree cutting to allow for power line wayleave, Trees falling on the power lines, Electrocution of wild animals	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Kenya power

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
27	Kajiado	Lake Magadi	Soggy grounds	Low (Sparse population around the lake shores)	Use Concrete poles	Contractor
			Corrosion		Ensure cross arms are anti-corrosive	Contractor
			Birds Electrocution		Use insulated cables	Contractor
			Risk of flash floods		Take precaution if working in flood prone areas, don't site poles along flood prone areas	Contractor
		Ngong Hills	Rugged landscape	Low (sparse population at the foot of the hills)	Protected areas not settled, in Rugged landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor
		Ngong Forest Sanctuary	Tree cutting	Nil (gazetted forests not settled)	Protected area not settled, Preserve Sanctuary	Contractor
		Ngurumani Escarpment	Rugged landscape and rivers	Nil (gazetted area not settled)	Greater part is Protected area and not settled. At the foot of the escarpment, site poles away from the riparian zones	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Amboseli National Park	Human-Wild life conflict, Electrocutions and struggling of giraffes	Nil (gazetted area not settled)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	Contractor
28	Makueni	Makongo Forest	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Low (sparse settlements proximal to the forest edges)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas.	Contractor
		Kilungu forest	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Low (sparse settlements proximal to the forest edges)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas.	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Chyulu hills National Park	Not within Project footprint	Nil (gazetted area not settled)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions..	Not Applicable
		Amboseli National Park	Not within Project footprint	Nil (gazetted area not settled)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas.	Contractor
29	Kitui	Nuu Forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Endau Forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Gaikuyu Forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Mumoni forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Tsavo East	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
30	Kilifi	Arabuko Sokoke Forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Kaya Shrines	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Dakacha Woodlands	Not within Project footprint	Nil (gazetted area not settled)	It is home to Clavers Weaverbird and Sokoke Pipit birds which are small and not endangered and which power lines don't pose a threat. Contractor not to interfere with the forest.	Contractor
		mangrove forests along the coast line	Not within Project footprint	Nil (gazetted area not settled)	Mangroves flourish along sea shores in marshy areas not settled. The contractor and staff should however not interfere with mangrove forests.	Contractor
31	Kwale	Shimba hills National park		Nil (gazetted area not settled)	Any line extension falling within the National park should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	Contractor
		Buda Forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Gogoni Forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Gonia forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Jombo forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Mailunganji forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Marenji forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Mkongani forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
32	Taita Taveta	Tsavo West National Park	Not within project footprint.	Nil (gazetted area not settled)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	Contractor
		Taita Taveta Wildlife Sanctuary	Protected area, Not within project footprint.	Nil (gazetted area not settled)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	Contractor
		Mwandongo Forest	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Ngangao forest	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Kasigau Forest	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Kinyesha Mvua	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Irizi	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Muraru	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Vuria	Highest point in Taita Hills and an important water catchment area. Rugged landscape and soggy grounds	Low (Sparse settlements around the area)	Promote use of Concrete poles on soggy grounds. Avoid siting poles on unstable grounds.	Contractor

Generic Environmental, Social, Health and Safety Management Plan (ESHS-MP)

The purpose of the Generic Environmental, Social, Health and Safety Management Plan (ESHS-MP) is to provide guidance during the implementation of the Proposed Last Mile Projects, guide the Contractor during preparation of site and lot specific ESHS-MPs and ensure compliance to relevant Legal and Statutory requirements applicable to the Last Mile Connectivity Project. Towards this end, the ESMP will:

Ensure that proper appraisals on the effects of projects takes place and that proper measures are put in place to mitigate the effects;
Set out the basis for compliance and enforcement of terms and conditions for approval;
Design compliance strategies; and
Monitor compliance and managing of the environment.

GENERIC ESMP AND MITIGATION PROGRAM

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	Responsibility	Activity	Responsibility		
1	Electric shocks and electrocution of people.	Proper public education to the people on safe use of electricity	KPLC	Inspection	KPLC	No of Public safety awareness sessions held No of accidents recorded No of deaths Medical Records.	Pre-construction, construction and Post Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	Responsibility	Activity	Responsibility		
		Proper wiring in the customers' premises by qualified technicians	Contractor	Inspection and issuance of Wiring Certificates	Contractor	Availability of wiring certificate	construction
		Installation of danger /hatari signs on the MV poles	Contractor	Inspection	Consultant	Presence of Danger or Hatari signs on all MV poles	construction
2	Avifauna collisions and fatalities	Ensure that the new MV lines run along road reserves and be short(not more than 1 kilometer) extensions of existing line where birds are used of the obstacle to prevent any accidental collisions and electrocutions	Contractor	Inspection	Consultant	No. of avifauna killed Insulated cables used	Pre-construction, Construction
		Maping of bird areas and detail mitigation measures to be taken, e.g use of insulated conductors, delta formation of the lines (Refer to technical drawings)	Contractor	Inspections	Consultant	No. of avifauna killed	Pre-construction and construction
3	Impacts on air quality from vehicle exhaust emissions	Ensure that Drivers do not leave vehicles idling so that exhaust emissions are lowered.	Contractor	Inspections	Consultant	No. of vehicles and frequency of idling onsite	Construction
		Maintain all machinery and equipment in good working order to ensure minimum emissions are produced during construction.	Contractor	Inspections	Consultant	Maintenance Records	Construction
4	Solid waste (Little if any solid waste will be generated which includes conductor and tree cuttings)	Ensure that: All left over conductor cuttings are disposed appropriately or returned to the store for proper disposal Proper budgeting of materials to reduce wastage. practice 3 Rs of waste management: reduce, reuse, recycle of materials	Contractor	Inspection	Consultants	No waste on site Records of material return to store or disposed	Pre-construction and Construction
5	Management of Scrap poles. (Risk of hazardous chemicals used in pole treatment, danger of injury to public)	Recover all Scrap poles and take them to the nearest KPLC stores for appropriate disposal.	Contractor	inspection	Consultant	Delivery forms	Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	Responsibility	Activity	Responsibility		
6	Negative cultural exchange and social ills	Ensure tolerance and respect of varying cultures	Contractor	inspection	Consultant	Number of complaints from workers and Community	Construction
7	Occupational safety and health hazards such as risk of falling from heights, Cuts, Exposure to welding fumes/light, Exposure to paints, falling into dug holes etc.	Ensure: Safe work procedures are adhered to. Safety awareness creation to the workers Use of personal protective equipment like gloves, helmet, climbing shoes, harnesses etc. Staff Training and regular equipment service and testing Only trained & certified workers to install electrical equipment; Use of signs, barriers and education/ public outreach to prevent public contact with potentially dangerous equipment; Maintain a fully stocked and accessible first aid kit and trained first aiders Observe OSHA 2007 regulations	Contractor	Inspection	consultant	Workers in PPE Records of safety awareness sessions held with workers Fully stocked First Aid Kit Competency records Tool box talk records	Construction
8	Vandalism of Transformers	Community policing to be encouraged to reduce vandalism of transformers	KPLC	Public awareness and Sensitization forums	KPLC	No. of vandalism cases reported	Pre-Construction, Construction and Post construction
		Welding of installed new transformers	Contractor	Inspection	Consultant	No of welded transformers	construction
9	Loss of physical cultural resources	Report all chance finds to National Museums of Kenya (NMK)	Contractor	Inspection	Consultant	Records of any chance finding reports to NMK	Pre-construction and Construction
10	Oil Leaks	Ensure that all oil leaks that may result from the transportation, storage and installation of transformers and other associated equipment are segregated and disposed properly by a reputable/registered waste handler in accordance with the waste disposal plan.	Contractor	Inspection	Consultant	Records of oil leaks	Preconstruction, Construction and Post-Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	Responsibility	Activity	Responsibility		
11	Public health risk/ HIV/AIDs	Public awareness on HIV/AIDs ensure Provision of condoms distribution of HIV & AIDS awareness materials in collaboration NACC	Contractor	Inspection	Consultant	HIV/AIDs Awareness materials disbursed to the public Availability of Condoms No of public health awareness sessions with workers	Construction
12	Impact on Natural Vegetation (The project will involve power lines mainly along the road reserves)	Limit way leave areas where line traverses private land and ensure that it runs along the road reserve and the existing wayleave as much as possible. Ensure Proper demarcation and only clear vegetation (upon approval by KPLC) in necessary areas Use PVC covered conductors for LV phase conductors	Contractor	Inspection	Consultant	No of trees cut Vegetation clearance Approval records	Pre- Construction and Construction
	Damage to Privately owned trees and crops	In the unlikely event the line is routed through private land and trees/crops are affected, KPLC will compensate.	KPLC	Inspection	KPLC	No. of trees/ crops compensated Compensation record	Preconstruction
13	Construction material sourcing-wooden poles. (Majority of these distribution lines are constructed using wooden poles)	Proper bill of quantities to be adhered to ensure no over-procurement of wooden poles (Refer to prices schedule No. 1 and 2 of the bidding document)	Contractor	Inspection of Designs	Consultant	No. of wooden poles used vis-à-vis purchased	Preconstruction and Construction period
		Ensure Proper storage of poles to minimize loss	Contractor	Inspection	Consultant	No of spoilt poles	Pre-Construction and Construction
		Source poles from NEMA (or equivalent) approved suppliers	Contractor	Inspection	Consultant	Certifications and licensing of the suppliers	Pre-Construction and Construction
		Ensure Use of recyclable poles where possible	Contractor	Inspection	Consultant	No. of recycled poles	Construction
14	Noise	Ensure: Proper servicing of vehicles minimal noise generation during construction and Maintain all work equipment at optimal operating condition Monitor noise levels at sensitive receptors (residential areas, schools, hospitals) Work through community liaison officers to agree on	Contractor	Inspection	Consultant	Inspection reports Number of complaints	Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	Responsibility	Activity	Responsibility		
		working hours and respond promptly to complaints.					
15	Risk of open Fires during construction	Ensure: No burning of vegetation along the distribution lines rights-of-way Avoid careless handling of open fires	Contractor	Surveillance	Consultant	Number of fire incidences	Construction

C. Specifications for Environmental, Social, Health and Safety Management (ESHS) of Works

Essential ESHS issues of worksite management

The AFD/EU/EIB Last Mile Project involves maximization of 2,082 transformers and installation of 940 new transformers. The specific sites for installation of both new transformers and MV lines (both 11kV and 33kV) are yet to be identified. In this case, Environmental and Social Impact Assessment (ESIA) study for this project has not been carried out. However, Copper Chromium Arsenic (CCA) treated wooden poles will be used on a great extent of this project.
The EPC contractors shall therefore undertake that these poles shall be dealt with according to international best practices. Contractors shall be required to make an initial E&S audit of the supplier of wooden poles, and then carry out monthly E&S inspection visits of the supplies, to ensure due respect of international best practices in the management of wooden poles. The provision of poles shall be authorized only after receiving the initial E&S audit report and due justification of consideration of any gaps identified in this initial audit reports.

Generally, the AFD/EU/EIB Last Mile Project has been classified as **Category B** Project as per AFD categorization criteria. After lot specific ESMPs are done, any site that requires further action, site specific ESIA will be conducted by KPLC, site specific ESMPs developed and alternative funding sought.

Note: The AFD/EU/EIB is put into 26 lots and each lot is envisaged to have unique ESHS issues. In this context, Lot Specific ESMP will have the same meaning as Worksite ESMP in the ESHS Requirements.

ESHS requirements not applicable under this Contract

The ESHS norms, standards and discharge limit values recommended by the specialised international organisations affiliated to the United Nations shall apply to the Contract:
Yes ☐ / No ☑

[In the case of a project rated B[16] by AFD, check "No". Only the country's regulations are applicable. The table below should then be completed as per the example provided below, stating that Clauses 9.2 and 9.3 are not applicable.
In the case of a project rated A or B+ by AFD, check "Yes".]

The following Clauses of the ESHS Specifications shall not apply to this Contract and shall not be priced by the Bidder under the specific ESHS Cost Schedule:

Number of the non-applicable Clause	Description
9.2 and 9.3 - Norms, standards and discharge limit values recommended by the specialised international organisations affiliated to the United Nations, as described in ESHS Specifications	No discharges expected from this project.
10.4 and 10.5 – Protection of adjacent areas	This project involve connecting electricity to schools, houses, hospitals etc hence distance restriction does not apply
16.2 – Vegetation Clearing	The project does not involve major civil works to warrant the clause 16.2 being triggered
39.7 – Local recruitment office	Project by its nature does not require local recruitment office because workers will be recruited on need basis in a particular site. KPLC's requirement dictates that for unskilled labour, local people shall be considered.
42.5, 42.6 and 42.7 – Damage to people and property	The project does not involve blasting or quarrying

Throughout the present ESHS Specifications (hereinafter called "**the ESHS Specifications**"), a reference to Conditions of Contract, abbreviated by CC, means a reference to both the General Conditions of Contract and the Particular Conditions of Contract. Readers should apply due care, when being referred to a specific Clause or Sub-Clause, to:

– Read first the Clause or Sub-Clause text from the General Conditions of Contract;

[16 The A, B+ or B ranking of the project is carried out by the AES (Environmental and Social Support) Division of AFD, after analyzing the project's risks and environmental and social impact.]

– Then check whether this text has been amended by the Particular Conditions of Contract, and if so, to which extent.

As per CC Sub-Clause 1.5 – Priority of Documents, when interpreting the Contract, the terms of the Particular Conditions of Contract prevail over those found in the General Conditions of Contract.

Any term in these ESHS Specifications which is identical to a term in the Conditions of Contract shall have the same meaning as the one defined in the Conditions of Contract. Any term in capital letters in these ESHS Specifications is defined in CC Sub-Clause 1.1 – Definitions.

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A. Environmental, Social, Health and Safety Management System

1 Responsibilities and Liabilities

1.1 In conjunction with his obligations defined under the Contract, the Contractor will plan, execute and document construction works pursuant to the Environment, Social, Health and Safety (ESHS) Specifications.

1.2 The Contractor is liable for all damages to natural resources caused by the execution of the Works or the methods used for execution, unless it is established that the execution or methods were necessary, according to the provisions of the Contract or an Engineer's instruction.

1.3 Under the Contract and as introduced by the ESHS Specifications, the term "Project Area" means:

a) The land where work will be carried out; or

b) The land necessary for the implantation of construction facilities (work camp, workshops, offices, storage areas, concrete production plants) and including special access roads; or

c) Quarries for aggregates, rock material and riprap; or

d) Borrow areas for sand and other selected material; or

e) Stockpiling areas for backfill material or other demolition rubble; or

f) Any other location, specifically designated in the Contract as a Project Area.

The term "Project Area" encompasses any individual Project Area or all Project Areas.
For the sake of clarity, Project Area is a different concept than Site under CC Sub-Clause 1.1.6.7.
Project Area defines an area within which the Contractor is to comply with environmental, social, health and safety obligations defined in the ESHS Specifications.

Site is the places where the Permanent Works are to be executed and to which Plant and Materials are to be delivered, and where right of access to, and possession of, is to be given by the Employer to the Contractor. The Employer is under no similar obligation for any area located outside the Site, even if within the Project Area, where access is at Contractor's risk.

In term of physical footprint, the CC Sub-Clause 1.1.6.7 Site is included in the Project Area. The Project Area is then of greater geographical extent than the Site.

1.4 The ESHS Specifications refer to the entire area of influence for the Works:

a) Protection of the natural environment (water, air, soil, vegetation, biological diversity) in areas within any Project Area and its surroundings, i.e. including but not limited to access roads, quarries, borrow areas, stockpiling of backfill material, camps or storage areas;

b) Health and safety conditions to be maintained for the Contractor's personnel and any other person present on the Project Areas, or along access routes;

c) Working practices and the protection of people and populations living near the Project Area, but exposed to the general disturbance caused by works.

1.5 Subcontractors:

The ESHS Specifications apply to the Contractor and unless explicitly agreed with the Engineer, all Subcontractors used for the execution of the Works. Pursuant to Sub-Clause 4.4 of the CC, the Contractor is fully liable for all actions, non-compliance and negligence by Subcontractors, their representatives, employees and workers, to the same degree as it would be held liable for its own actions, non-compliance or negligence or that of its own representatives, employees or workers.

1.6 Applicable regulations:

The Contractor must identify all regulations in relation to the protection of the environment (water, air, soils, noise, vegetation, fauna, flora, waste, groundwater) and, pursuant to Clauses 4 and 6 of the CC, the protection of people (labour law, indigenous populations, standards on occupational exposure, other). The Contractor must list all texts, standards and other regulatory limitations in its Worksite Environmental and Social Management Plan (Worksite - ESMP as specified in Sub-Clause 2.1 of the ESHS Specifications) and specify the means taken for compliance.

2 ESHS Planning Document

2.1 Worksite Environmental and Social Management Plan (Worksite - ESMP)

2.1.1 The Contractor prepares and ensures prior validation by the Engineer, implementation and regular update of a Worskite Area Environmental and Social Management Plan (Worksite - ESMP).

2.1.2 The Worksite - ESMP represents the unique reference document in which the Contractor defines in detail all organisational and technical provisions implemented to satisfy the obligations of the ESHS Specifications.

2.1.3 The Contractor defines in the Worksite - ESMP the number, the locations and the type of Project Area as defined in Sub-Clause 1.3 of the ESHS Specifications. For each of the identified Project Area, unless otherwise agreed by the Engineer, the Contractor establishes an Environmental Protection Plan (EPP). The EPP(s) are annexed to the Worksite - ESMP.

2.1.4 The Worksite - ESMP covers the entire period from the Contract Agreement signature date to the date of issue of the Performance Certificate by the Engineer.

2.1.5 Unless agreed otherwise by the Engineer, the Worksite - ESMP is written in the language of communication defined under Sub-Clause 1.4 of the CC.

2.1.6 The first draft version of the Worksite - ESMP is to be provided by the Contractor to the Engineer within 28 days from the date of execution of the Contract Agreement.

2.1.7 No physical work or activity shall commence on any Project Area until such time the Worksite - ESMP, and the annexed EPP corresponding to the Project Area, are approved by the Engineer.

2.1.8 During the execution of the Works, whenever instructed by the Engineer, the Worksite - ESMP will be updated by the Contractor and reissued to the Engineer. The revised version shall highlight the new elements incorporated in the document.

2.1.9 The Worksite - ESMP (and the EPP) is structured according to the plan specified in Appendix 1 to the ESHS Specifications.

3 Management of non-conformities

3.1 In application of Clause 5, non-conformities detected during inspections carried out by the Contractor or Engineer are subject to a process adapted to the severity of the situation. The non-conformities will be defined as deviations from the requirements of the applicable regulations, the ESHS Specifications, the ESMP, and the Worksite - ESMP. Non-conformities are divided into 4 categories as follows:

3.1.1 Notification of observation of minor non-conformities. The non-conformity results in a notification to the Contractor's Representative, followed-up by a signed notification of observation prepared by the Engineer. The multiplication of notifications of observation at the Project Area, or absence of corrective actions by the Contractor, can result in the severity of the non-conformity being raised to that of level 1.

3.1.2 Level 1 non-conformity: Non-conformities that present a moderate and non-immediate risk for health, environment, social or safety. The non-conformity is identified in writing to the Contractor and shall be resolved within five (5) days. The Contractor addresses to the Engineer the proof explaining how

the non-conformity has been corrected. Further to an inspection and a favourable evaluation of effectiveness of the corrective action, the Engineer validates in writing the close-out for the non-conformity. In all cases where a non-conformity of level 1 is not resolved within one (1) month, the severity of the non-conformity is raised to level 2.

3.1.3 Level 2 non-conformities: applies to all non-conformities that represent a moderate and immediate risk or with significant consequences to health and/or the environment, social or safety. The same procedure as for level 1 non-conformities is applied. Corrective action shall be taken by the Contractor within three (3) days. All level 2 non-conformities which are not resolved within one (1) month, are raised to level 3.

3.1.4 Level 3 non-conformities: applies to all non-conformities that have resulted in damage to health or the environment, or which represent a high risk for health, safety, environmental or social hazards. The highest levels of the Contractor's and Engineer's hierarchies present in the Employer's country are informed immediately and the Contractor has twenty-four (24) hours to bring the situation under control. Pursuant to Clause 14.7 of the CC, a level 3 non-conformity results in the suspension of interim payments until the non-conformity has been resolved. If the situation requires, and in pursuance to Clause 8.8 of the PC, the Engineer can order the suspension of work until the resolution of the non-conformity.

4 Resources allocated to environmental management

4.1 ESHS supervisors and Manager:

4.1.1 Pursuant to Sub-Clause 4.18 of the CC and in addition to the provisions of Sub-Clause 6.7 of the CC, the Contractor appoints one (or two depending on the case) Environment, Social, Health and Safety Manager(s) in charge of implementing the ESHS Specifications. Several experts may be assigned to fulfill this position. The manager(s) will be the Key ESHS Personnel identified in the bidding process, if any.

4.1.2 The ESHS Manager is permanently based at the Project Area for the full duration of the Works as of Contractor's mobilisation until Taking-Over Certificate is issued.

4.1.3 This manager holds the power within the Contractor's organisation to be able to suspend the Works if considered necessary in the event of level 2 or 3 non-conformities, and allocate all resources, personnel and equipment required to take any corrective action considered necessary.

4.1.4 The ESHS Manager speaks fluently the language of communication of the Contract, and the official language of the Employer's country, if the language of communication of the Contract is not the official language. The ESHS Manager will hold a relevant University degree or a significant experience of at least five (5) years in designing and monitoring the implementation of an environmental and social management plan for construction works.

4.1.5 ESHS supervisors are appointed in sufficient numbers and represent the ESHS Manager within work teams. Their role is to ensure that the Works are carried out pursuant to the ESHS Specifications and notify the ESHS Manager of any detected non-conformities.

4.2 Person in charge of relations with external stakeholders:

4.2.1 The Contractor appoints a person responsible for relations with external stakeholders: local communities, administrative authorities, religious and other representatives. If necessary, a team will be created.

4.2.2 Administrations and local authorities will be informed of the existence of this person as of the start of works and will be provided with contact details so as to be able to contact this person if a problem arises during the execution of works, or concerning the behaviour of the Contractor's Personnel, inside or outside the Project Area.

4.3 The team, including the ESHS supervisors and manager, and the person in charge of relations with external stakeholders, will be allocated the necessary resources to operate independently (travel, office equipment and communication).

5 Inspections

5.1 In addition to the ESHS Manager's own inspections, an ESHS inspection will be carried out on the facilities and Project Area on a weekly basis jointly with the Engineer.

5.2 A written report will be drafted for each weekly inspection, in a format approved by the Engineer, addressing non-conformities detected on the Project Area as specified in the ESHS Specifications.

5.3 Each non-conformity will be documented by a digital photograph with captions to provide a visual illustration, explicitly indicating the location, date of inspection and the non-conformity in question.

6 Reporting

6.1 As part of the Progress Report specified in Sub-Clause 4.21 of the CC, the Contractor submits an ESHS activity report summarising all ESHS initiatives implemented in relation to the execution of the Works during the reporting period to the Engineer on a monthly basis. The activity report is a separate document from the update of the Worksite - ESMP, which is updated at the intervals indicated in Sub-Clause 2.1.8 of the ESHS Specifications.

6.2 The ESHS activity report is written exclusively in the language of communication defined under Sub-Clause 1.4 of the CC.

6.3 Pursuant to Sub-Clause 4.21 of the CC, the ESHS activity report is submitted at the latest 7 working days after the last day of the month in question. The report contains the following information.

6.3.1 List of ESHS personnel present at the Site at the end of the month.

6.3.2 Construction works activities conducted during the month.

6.3.3 Inspections carried out (location and intervals).

6.3.4 Non-conformities detected during the month with descriptions of the root cause analysis and corrective actions taken.

6.3.5 Description of actions conducted and measures taken during the month to remedy non-conformities and to manage environmental, social, health and safety risks and impacts.

6.3.6 Description of stakeholder engagement activities undertaken with neighbouring populations, local authorities, governmental agencies.

6.3.7 Monitoring results for the following indicators:

a) Effluent quality (Sub-Clause 12.5 of the ESHS Specifications), if applicable;

b) Drinking-water quality, if applicable;

c) Hazardous and non-hazardous waste generation;

d) Air and noise emissions, if applicable;

e) Project Area state (Sub-Clause 20 of the ESHS Specifications);

f) Recruitment, number of positions and hours worked by local Contractor's Personnel (Sub-Clause 39.3 of the ESHS Specifications);

g) Health & safety statistics: in pursuance to Clauses 4 and 6 of the CC, number of fatal accidents, lost-time accidents, number of accidents without lost-time, serious illness, frequency of accidents, and serious misconduct by Contractor's Personnel (record sheet attached as an appendix to the activity report, pursuant to Sub-Clause 7.7 of the ESHS Specifications); including root cause analysis and corrective actions taken.

6.3.8 Where appropriate, description of the formal or informal complaints (negative media attention, strikes or labour

disputes, protests, complaints from communities, NGO or workers or formal notice from authorities, etc.) related to environmental, social, health and safety risks and impacts of the Works; including root cause analysis and corrective actions taken.

6.3.9 Report on training activities (topic, number and duration of sessions, number of participants).

6.3.10 Provisional environmental, social, health and safety actions for the coming months.

6.4 Notification of ESHS events:

6.4.1 The Engineer is informed within one hour of any accident, (i) involving serious bodily injury to a member of personnel, a visitor or any other third party, caused by the execution of the Works or the behaviour of the personnel of the Contractor, or (ii) any significant damage to private property, or (iii) any significant damage to the environment.

6.4.2 The Engineer is informed as soon as possible of any near-accident relating to the execution of the Works which, in slightly different conditions, could have led to bodily injury to people, or damage to private property or the environment.

7 Rules of Procedure

7.1 Rules of procedure are established by the Contractor for the Project Areas, addressing the following: safety rules, zero tolerance for substance abuse (refer to Clause 37), environmental sensitivity of areas around the Project Areas, the dangers of STDs with HIV/AIDS, gender issues (in particular sexual harassment) and respect for the beliefs and customs of the populations and community relations in general (drawing special attention to the risks of prostitution and human trafficking).

7.2 The rules are clearly displayed at the different Project Areas.

7.3 The rules confirm the Contractor’s commitment to implementing the ESHS provisions provided for in the Contract.

7.4 New Contractor's Personnel and existing Contractor's Personnel are made aware and acknowledge their understanding of the rules of procedure and the associated provisions. Rules of procedure document are initialed by all Contractor's Personnel prior to the start of any physical work at any Project Area.

7.5 Pursuant to Clauses 6.9 and 6.11 of the CC, the rules of procedure include a list of acts considered as serious misconduct and which must result in dismissal from any Project Area by the Contractor, or by the Engineer if the Contractor is not acting in due course, should a Contractor's Personnel repeatedly commit an offence of serious misconduct despite awareness of the rules of procedure, and this is without prejudice to any legal action by any public authority for non-compliance with applicable regulations:

a) Drunkenness during working hours;

b) Drug use;

c) Punishable statements or attitudes, and sexual and mental harassment in particular;

d) Violent behaviour;

e) Intentional damage to the assets and interests of others, or the environment;

f) Repeated negligence or imprudence leading to damage or prejudice to the environment, the population or properties, particularly breaching provisions intended to prevent the spreading of STD with HIV/AIDS;

g) Possession and/or consumption of meat or any other part of an endangered animal or plant as defined in the Washington convention (CITES) and national regulations.

7.6 Serious misconduct, such as organization of sex trade (pimping), committing pedophilia, rape, physical aggression, drug trafficking, deliberate and severe pollution, trading and/or trafficking in all or part of protected species, shall lead to immediate dismissal as of the first report of misconduct is detected, in application of the rules of procedure and labour laws.

7.7 The Contractor establishes a record for each case of serious misconduct, and a copy will be provided to the Contractor's Personnel in question, indicating all action taken to terminate the misconduct by the Contractor's Personnel in question and to bring the attention of other Contractor's Personnel to the type of incident detected. This record will be provided to the Engineer as an attachment to the ESHS activity report (see Sub-Clause 6.3 of the ESHS Specifications).

8 ESHS Training

8.1 The Contractor prepares a training and capacity building program for its Contractor's Personnel, as described in the Worksite - ESMP and documented each month in the ESHS activity report.

8.2 The Contractor also details in the training program the actions and ESHS training for Subcontractors and other members of the joint venture when applicable.

8.3 Training sessions are two-fold: introductory sessions for starting work at the Project Area, and technical training as required in relation to the execution of the Works.

8.3.1 Starting work sessions are organised for each Contractor's Personnel and shall cover as a minimum:

a) Rules of procedure;

b) Safety rules on Project Areas;

c) Protection of areas adjacent to Project Area;

d) Risks relating to sexually transmitted diseases (Sub-Clause 6.7 of the CC), prostitution, human trafficking, and sexual harassment;

e) Basic health: combating malaria (if prevalent) and waterborne diseases, improving hygiene;

f) Emergency response procedures or evacuation.

8.3.2 **Technical training:**

a) Training in the skills needed for tasks requiring a work permit (Clause 24 of the ESHS Specifications);

b) Training in first aid and transporting the injured in order to achieve the targets defined in Sub-Clause 29.1 of the ESHS Specifications on the number of first aid officers per Project Area and per team;

c) Ability to drive on rough ground.

8.4 The Contractor prepares an awareness program, where applicable, for local communities adapted to the main risks relating to the Works. This program will be included in the training program described in Sub-Clause 8.1 of the ESHS Specifications.

9 Standards

9.1 The Contractor complies with all norms, standards and discharge limit values defined in the national regulations of the Employer's country regulations and pursuant to Sub-Clause 1.6 of the ESHS Specifications.

9.2 The Contractor comply with norms, standards and discharge limit values recommended by the specialised international organisations affiliated to the United Nations, as described in Sub-Clause 9.3 below of the ESHS Specifications. In the event of discrepancies in between international standards and national regulations, the Contractor shall comply with the most stringent requirements.

9.3 The specialised international organisations affiliated to the United Nations referred to in Sub-Clause 9.2 of the ESHS Specifications include:

– World Bank, including the IFC and its Environmental, Health and Safety guidelines available from http://www.ifc.org/ehsguidelines.

For matters not addressed in the IFC above document, the most stringent of the norms, standards and discharge limit values of the following institutions shall apply:

– World Health Organization (WHO);

– International Labour Organization (ILO) (in particular in pursuance to Sub-Clauses 6.20, 6.21, 6.23 and 6.24 of the CC);

– International Maritime Organization (IMO).

B. Protection of the Environment

10 Protection of adjacent areas

10.1 Pursuant to Sub-Clause 4.18 of the CC, and unless instructed otherwise by the Engineer, the Contractor uses construction methods and means of protection in order to avoid or minimize adverse effects that are incurred on vegetation, soils, groundwater and surface water, biodiversity, natural drainage and the water quality in areas within any Project Area and its surroundings for the entire duration of the Works.

10.2 Wetland areas include marshes, fens, mires or natural or artificial bodies of water, whether permanent or temporary, where water is stagnant or flowing, fresh, saline or briny, including seawater with a low-tide depth of six metres or less. Filling of all or part of a wetland area is not permitted, unless the Works are necessary according to the provisions of the Contract or the instructions of the Engineer.

10.3 With the exception of access roads, or unless instructed otherwise by the Engineer, the entire perimeter of land sites with a surface area of less than 2 hectares is physically demarcated with a fence or

tape. For Project Area with a surface area of more than 2 hectares, the perimeter will be physically demarcated by a perimeter track, road, signs or any other means leaving no possible ambiguity as to the location of the Project Area perimeter.

10.4 Unless instructed otherwise by the Engineer, the Contractor defines the perimeter of the Project Area at a distance of at least:

a) 50 m from any permanent water course and outside of floodable areas;

b) 300 m from sensitive urban services and buildings (health centre, school centres, water supply for populations);

c) 200 m from any housing; and

d) 300 m from housing in the specific case of work requiring the use of explosives.

10.5 If the footprint of the Works do not respect the distances mentioned in the situations a) to d) of Sub-Clause 10.4 above of the ESHS Specifications, and unless agreed upon otherwise by the Engineer, the Contractor will contract a bailiff to make a sworn statement regarding the existence and conditions of residential buildings situated around the Site with a distance specified in paragraph b) to d) of Sub-Clause 10.4 of the ESHS Specifications. The bailiff's sworn statement is prepared and provided to the Engineer with the EPP.

11 Selection of borrow areas, backfill material stockpile sites and access road

11.1 The Contractor will submit to the Engineer for prior approval, within the framework of the EPP (provided in Clause 2.1.3), (i) the location of proposed borrow areas or areas to be excavated, (ii) proposed backfill material stockpile locations or zones designated for the rubble from demolition works.

11.2 The access routes to the Project Areas will be shown on a map and approved by the Engineer prior to the start of the corresponding Works.

12 Effluents

12.1 Effluents consist of liquid discharges, including infiltration, from Project Area, transporting a pollutant (dissolved, colloidal or particles).

12.2 A pollutant is a given chemical compound that is at a concentration that is greater than the limit values recognised for that compound according to Clause 9 of the ESHS Specifications.

12.3 If no recognised threshold exists pursuant to Sub-Clause 12.2 of the ESHS Specifications, the Contractor provides proof that the charges are harmless.

12.4 No effluent is discharged by the Contractor into water courses, soils, lakes or the marine environment without prior treatment and without monitoring of the treatment's performance to guarantee the absence of pollution.

12.5 The Contractor carries out or contracts the monitoring of the effluent quality pursuant to Sub-Clause 12.4 of the ESHS Specifications. In the first case, the Contractor provides the ESHS Manager with the means and skills to carry out in-situ monitoring and laboratory analysis of the performance indicators. In the second case, the Contractor establishes a contract with a specialised contractor, accredited with the Employer's country authorities for this activity.

12.6 The physical and chemical parameters of the effluent that are monitored are those that are listed in the applicable regulations according to the provisions of Clause 9 of the ESHS Specifications. The parameters have prior approval from the Engineer.

12.7 The Contractor will list, locate, and characterise (flow, expected quality, discharge frequency) all sources of effluents and outlets in the natural environment in the Environment Protection Plan(s).

12.8 The Contractor will submit to the Engineer an effluent monitoring report on a monthly basis, including documentation for the following for each effluent discharge point: (i) average flow rates of discharged effluents, (ii) discharge frequencies and durations

over the month, and (iii) the physical and chemical quality of the effluent discharged, for the conformity parameters listed in Sub-Clause 12.1 above of the ESHS Specifications.

12.9 The special case of rainwater run-off:

12.9.1 Run off consists of the rainwater flow on the surface or the soil and other technical surfaces at Project Areas.

12.9.2 In the context of the Contract, run-off is considered as an effluent and will be treated in accordance with Sub-Clause 12.4 above, unless demonstrated otherwise, as documented and substantiated by the Contractor, and approved by the Engineer.

12.9.3 Particular attention will be given to all platforms with installed generators, hydrocarbon storage tanks, refuelling stations and concrete plants (cover, containment, settling, pH neutralization).

13 Atmospheric emissions and dust

13.1 Emissions refer to any discharge into the air of solid substances, aerosols, gases, radiation, or energy, whether point sources (e.g. incineration stack) or diffuse (e.g. fugitive dust emissions from road use by trucks).

13.2 The Contractor will use equipment and adopt construction and transport methods with atmospheric emissions which are not in excess of the threshold emission values recommended in the applicable regulations according to the provisions of Clause 9 of the ESHS Specifications.

13.3 The fleet of vehicles or equipment emitting combustion gases will be maintained at the intervals and according to the methods specified by the manufacturer.

13.4 The Contractor will document the maintenance records for its fleet of vehicles, machinery and equipment. The records will be in the language of communication defined under CC Sub-Clause 1.4, or

any other language approved by the Engineer, and will be at the disposal of the Engineer.

13.5 On unpaved roads used by the vehicles and machinery of the Contractor:

13.5.1 The Contractor takes action to abate fugitive dust emissions generated by vehicles or mobile equipment in residential areas and on roads within the Project Area perimeter.

13.5.2 The Contractor will implement the necessary measures, as described in the Worksite - ESMP, to avoid or limit dust generation: dust removal, regular watering, reduction of Contractor's vehicles speed as specified in Sub-Clause 44.9 of the ESHS Specifications.

13.6 When storage, handling and transportation of bulk materials is made in the open air and exposed to the wind, the Contractor implements the necessary dust abatement measures, including one or several of the following techniques: vegetation of the surface, covering of the surface, humidification of the surface, covering the trucks, etc.

14 Noise & vibration

14.1 The Contractor uses equipment and adopts construction and transport methods so not to generate noise levels in excess of values recommended in the applicable regulations according to the provisions of Clause 9 of the ESHS Specifications.

14.2 Except as otherwise provided in the Contract or unless waived by the Engineer, high noise generating works (e.g. pile driving, blasting, rock clearing, drilling, percussion drilling) which may impact occupied receptor areas are carried out during normal working days, but prohibited at night. A receptor area is defined as an area used for nocturnal socioeconomic activities (e.g. accommodation camps, residential areas, hotels, health centres).

14.3 The use of heavy vehicles at night is specified in Sub-Clause 44.9 of the ESHS Specifications.

15 Waste

15.1 The Contractor is responsible for identifying, collecting, transporting and treating all waste produced on the Project Areas by its personnel, Subcontractors and visitors.

15.2 Waste management should be based on the following hierarchy: prevention of waste generations, reuse, recycling and disposal. The Contractor selects suppliers having a voluntary and documented policy to reduce the volume and weight of packaging, and to select recyclable or biodegradable packaging.

15.3 The Contractor establishes and maintains a waste register which is at the disposal of the Engineer. This register will record all waste management operations: production, collection, transport, treatment. The following aspects are documented in this register:

a) Type of waste, using the nomenclature specified in Sub-Clause 15.7 of the ESHS Specifications;

b) Waste quantities;

c) Name and address of the third party waste management facilities receiving waste or parties taking possession of the substances no longer considered as waste;

d) Name and address of waste transport contractors;

e) Planned waste treatment.

15.4 The Contractor files and maintains at the disposition of the Engineer the waste manifests for the collection, transport, treatment and/or elimination of waste.

15.5 The waste register is established and available as of the Contractors mobilisation to any Project Area. This register will be archived for at least 1 year after the Taking-Over Certificate for the Works is issued.

15.6 The Contractor implements specific waste management practices adapted to the level of danger for human health or the natural

environment. Three waste categories are identified for Project Areas and in tracking documents:

a) Hazardous waste: any waste with one or several dangerous properties as listed in Appendix 2 to the ESHS Specifications;

b) Non-hazardous waste: any waste with no properties rendering it hazardous. Non-hazardous waste contaminated by hazardous material will be considered as hazardous waste, unless instructed otherwise by the Engineer;

c) Inert waste: any waste unaffected by any significant physical, chemical or biological modifications, which does not decompose, burn or produce any physical or chemical reaction, is not biodegradable and does not damage any substance with which it comes into contact in a manner likely to cause damage to the environment or human health.

15.7 The Contractor assesses, document and effectively implements any local recycling or re-use options for its waste.

15.8 Waste is categorised and stored separately prior to removal from the Project Areas, depending on the level of danger, phase (liquid, solid or gas), the waste management solution to be applied and its potential in terms of recycling or reuse.

15.9 Waste is collected from each Project Area at the same rate that it is produced and is placed in temporary locations meeting the following criteria:

a) Located at a distance of over 100 m from any natural sensitive area and over 500 m from any socioeconomic sensitive area (school, market, healthcare centre, water well or catchment area), with the exception of waste storage area in camps;

b) Protected from moving machinery and vehicles, but easy to access for regular collection;

c) Located on a flat impervious surface to prevent infiltrations;

d) Under cover for non-inert waste;

e) Stored in containers of the appropriate size, tightness and level of resistance depending on the danger and phase (solid, liquid, gas) of the waste;

f) Liquid wastes storage is equipped with secondary retention with a volume at least equal to the greater of the following two values (i) 100% of the capacity of the largest reservoir and (ii) 50% of the overall capacity of the associated reservoirs;

g) Hazardous waste stored pursuant to Sub-Clause 26.8 of the ESHS Specifications.

15.10 Waste is removed from Project Areas and transported to recycling, treatment and waste management facilities on a regular basis. The frequency of removal, approved by the Engineer, guarantees:

a) No overflow from containers;

b) No unpleasant odour or emissions which are dangerous for human health;

c) No proliferation of insects, rodents, dogs or other animals which are harmful or dangerous for human health;

d) Regular cleaning of containers and surfaces on which they are located.

15.11 Unless otherwise specified in the Contract or instructed by the Engineer, waste incineration is prohibited on Project Areas. Two exceptions are medical waste and green waste, which unless instructed to the contrary by the Engineer, are managed pursuant to Clauses 15.15.1 and 16.1.3 of the ESHS Specifications.

The use of third party waste management services is subject to a documented prior audit of the treatment, storage and recycling facilities by the Contractor, to guarantee the conformity with the provisions of the ESHS Specifications on waste.

15.12 Pursuant to Sub-Clause 1.5 of the ESHS Specifications, the provisions applicable to the Contractor regarding waste management also apply to any third party waste management Subcontractor. The Engineer reserves its right to inspect third party waste management facilities and prohibit the Contractor from using the facilities if considered unacceptable.

15.13 The management of non-hazardous waste complies with the following conditions:

15.13.1 Inert waste is removed or treated on-site and can be disposed in a permanent or temporary landfill with unused backfill material. The location, capacity and environmental protection measures, particularly for water courses, implemented by the Contractor or any Subcontractor, will comply with the provisions of the ESHS Specifications, and will be described in the EPP and validated by the Engineer.

15.13.2 Non-hazardous waste that cannot be recycled is disposed of to landfill, complying with the following criteria:

a) Walls and base sealed by a geo-membrane or a layer of compacted clay with a permeability 10-7 cm/s;

b) Drained for the recovery of leachates, which are routed to a lagoon aerobic/anaerobic treatment prior to discharge into the natural environment or collected in a temporary storage prior to regular collection and transfer to a treatment unit (septic tank or wastewater treatment plant);

c) Regularly compacted and covered by earth to limit odours and the proliferation of insects;

d) When the landfill has reached full capacity, vents are installed to evacuate gases, and the landfill covered by a geo-membrane with a minimum thickness of 1 mm, or a layer of compacted clay, and a top layer of 1.5 m of topsoil, which is revegetated.

Any other proposal must first be validated by the Engineer.

15.14 The Contractor's hazardous waste is managed by a specialised waste Subcontractor, accredited in the Employer's country for this activity.

15.15 In the absence of an existing waste management solution for hazardous waste satisfying the provisions of Sub-Clause 15.14 of the ESHS Specifications, the Contractor takes the following action:

15.15.1 Medical waste is incinerated in a specific facility constructed and accredited for this purpose. The Contractor will submit the technical specifications of the facility to the Engineer before importing or procuring the equipment.

15.15.2 Hydrocarbons, lubricants, paints, solvents and batteries are transported in drums to the capital city, or any other city where suitable waste management facilities are available. Sludge from settling tanks/ponds, septic tanks or oily water skimmers will also be managed in the same way.

15.15.3 Contaminated soils from construction/demolition and drilling muds will be treated, stabilised and disposed of to landfill. Prior approval is required from the Engineer regarding the method and site location. The Contractor obtains authorisation from the competent local authorities prior to any disposal to landfill.

15.15.4 Prior approval from the Engineer is required before implementing waste management solutions on any other hazardous waste.

15.15.5 Prior to the issue of the Taking-Over Certificate for the Works, the Contractor provides documentation on hazardous waste landfilled at other sites than accredited third party waste management facilities. The documentation includes a plan showing the location of landfill sites. The document is provided to the competent local authorities whose jurisdiction covers the landfill sites.

16 Vegetation clearing

16.1 The Contractor describes in the Worskite - ESMP the planned methods and schedule for vegetation clearing. Specific agreement from the Engineer is obtained prior to any clearing works.

16.1.1 Vegetation clearing using chemicals is not permitted.

16.1.2 Vegetation clearing using bulldozer is not permitted in zones less than 30 m from areas designated as sensitive by the Engineer, where only manual clearing is authorised.

16.1.3 Unless otherwise specified in the Contract or if otherwise instructed by the Engineer, burning vegetation is not permitted. Green waste can be burnt with prior approval from the Engineer regarding the location, method and schedule.

16.2 Areas cleared prior to undertaking earthworks are shown on a plan with a minimum scale of 1/10,000. Plans are submitted to the Engineer for validation prior to starting clearing works.

16.3 The Contractor undertakes physical demarcation of zones to be cleared using a method approved by the Engineer.

16.4 Trees not to be cut down are identified in relation with the Engineer. Such trees are marked with paint and protected against clearing machinery using a method approved by the Engineer.

16.5 Clearing is undertaken without damage to adjacent non-cleared areas. Topsoil is stored within the cleared areas at the edge of the cleared zone. Clearing is undertaken working from the edge of the zone inwards.

16.6 Wood with economic value:

16.6.1 During clearing, the Contractor stockpiles separately: (i) tree trunks with a diameter at chest height greater than the size defined by the Engineer, and (ii) trunks with a smaller diameter, branches, leaves, stumps and roots.

16.6.2 Unless instructed otherwise by the Engineer when validating the plans of Sub-Clause 16.2 of the ESHS Specifications or

unless specified otherwise in the Employer's country regulations, the trunks of trees exceeding the diameter defined by the Engineer are made available to the local communities, according to the methods defined with the Engineer.

17 Biodiversity

17.1 The Contractor shall ensure that all personnel are informed and aware of the importance to protect fauna and flora. Information and awareness training is documented.

17.2 The Contractor shall ensure that all personnel are informed and aware of wildlife encounters procedures. Information and awareness training is documented.

17.3 The Contractor shall define in the Worksite – ESMP the method with regards to fauna and flora management prior to clearing activities. This method must notably address the work schedule, which sometimes can be adjusted to limit impacts on fauna and flora.

17.4 Where possible, areas shall be cleared from one side to another, or from the inside out, to prevent animals becoming trapped.

17.5 The Contractor personnel shall not approach, injure, hunt, capture, possess, feed, transport, rear or trade wild animals and/or collect eggs while working on the Project Areas.

17.6 The Contractor personnel shall not collect flora species while working on the Project Areas.

17.7 The Contractor shall report any sighting or finding of wounded or dead wildlife to the Engineer immediately.

17.8 The Contractor shall protect excavations to prevent injury to animals.

17.9 The Contractor shall release any trapped uninjured animals immediately.

17.10 The Contractor shall not disturb natural habitats outside the Project Areas.

17.11 The Contractor shall only use designated roads or paths and abide by speed limits.

17.12 The Contractor shall not start forest fires.

17.13 The Contractor shall not introduce Invasive Alien Species (IAS).

17.13.1 All construction machinery imported from overseas shall be inspected to detect IAS and washed before dispatching to the Project Areas.

17.13.2 If the presence of topsoil contaminated with IAS is detected, that topsoil shall only be stored or re-spread in the area from where it was removed.

17.13.3 When earthworks are carried out in IAS contaminated areas, vehicles shall be washed before moving them to other areas.

17.13.4 Where necessary, the Contractor shall develop IAS control procedures (e.g. physical removal, slashing, mulching, herbicides, etc.). Methods used to control or prevent such species shall not cause adverse impacts on the environment or communities.

17.13.5 To limit the risk of introducing marine invasive species, the Contractor shall control the ballast water and anti-fouling systems of vessels arriving from other bioregions in accordance with International Maritime Organization (IMO) conventions and guidelines.

18 Erosion and sediment transport

18.1 The Contractor plans earthworks and optimises the management of space to ensure that all cleared surfaces and areas exposed to soil erosion are minimised on all Project Areas.

18.2 Topsoil:

18.2.1 Unless indicated otherwise by the Engineer, the top 25 centimetres of the soil will be considered as topsoil.

18.2.2 Earthworks for the temporary occupation of the Project Area are preceded by the clearing of topsoil and the storage of this soil separately from the underlying sterile soil.

18.2.3 Topsoil is stored according to the provisions approved by the Engineer to enable reuse during Project Area rehabilitation.

18.2.4 The refurbishment must be done in accordance with the provisions of Clause 19.

18.3 Draining and treatment of rainwater run-off:

18.3.1 The gradient of Project Areas allows the collection and drainage of rainwater from the entire surface area to one or several discharge points. No pools of water are created.

18.3.2 Suspended solids in rainwater are removed using sediment traps / settling ponds. Rainwater from vehicle parking areas, machinery areas, workshops is subject to treatment with oily water separators.

18.3.3 Rainwater treatment units are sized, cleaned, maintained and accessible to ensure compliance with the effluent quality criteria defined in Sub-Clause 12.9 of the ESHS Specifications and to allow monitoring of performance.

18.4 Sediment control:

18.4.1 The Contractor installs sediment control barriers to slow the flow of water and control sediment transport at Project Areas with (i) a gradient of more than 20%, and (ii) where land is disturbed by the Works or where stockpiled mineral material are susceptible to erosion.

18.4.2 Sediment control barriers are installed on the slope or at the base of the slope to protect the natural drainage system from

sediment accumulation at levels higher than the natural situation. These barriers comply with the following principles:

a) Made with geotextiles or straw bales or any other means pre-approved by the Engineer;

b) Deployed before the start of works and removal of topsoil. Barriers can be used for the physical demarcation of working areas;

c) Installed, cleaned, maintained and replaced according to manufacturer recommendations;

d) Drainage surface area does not exceed 1,000 m² per 30 m of barrier. The length of the slope behind the barrier is less than 30 m, and is not used for flows in excess of 30 l/s.

18.4.3 For the dredging of marine sediments, unless specified otherwise in the Contract, or instructed otherwise by the Engineer, and particularly if the working area is exposed to currents, the Contractor will install a geotextile silt curtain, or any other technique approved by the Engineer to control turbidity clouds.

18.5 Backfilling and stockpiling of backfill materials:

18.5.1 In the EPP of these temporary and permanent stockpiles, the Contractor defines the proposed arrangements (height, slope, drainage, revegetation, etc.) to guarantee stability and erosion resistance.

18.5.2 For permanent backfill material stockpiles, the stockpile is shaped and compacted to ensure long-term stability.

18.5.3 Temporary stockpiles likely to result in strong erosion (duration of storage, rainy season, presence of downstream issues, etc.) are protected against runoff erosion by (i) revegetation using fast growing grass species, either by

direct seeding or by hydro-seeding, or (ii) using other natural anti-erosion cover with prior approval from the Engineer.

19 Site rehabilitation

19.1 Unless instructed otherwise by the Engineer, the Contractor will rehabilitate all Project Areas disturbed by the Works, prior to the provisional acceptance of the Works.

19.2 All buildings and free standing and underground structures (e.g. piping, underground tanks, sumps and basins) are removed pursuant to the provisions of Sub-Clause 4.23 of the CC. All waste and rubble is removed in accordance to the provisions of Clause 15 of the ESHS Specifications. After removal of buildings structures and rubble, the Contractor returns Project Areas to their original condition, according to the following provisions.

19.2.1 Land is adjusted to ensure that run-off water drains without eroding soil or stagnating in pools. Unless instructed otherwise by the Engineer, the gradients of restored sites (excluding backfill as defined in Sub-Clause 18.5 of the ESHS Specifications) must be as for the adjacent undisturbed land.

19.2.2 Rehabilitated Project Areas do not represent hazards for people. Areas near steep drops at quarries are indicated with permanent concrete signs. Holes are refilled. Sharp or unstable items are rendered inoffensive.

19.2.3 Unless specified otherwise in the Contract, or instructed otherwise by the Engineer, the Contractor undertakes revegetation of all Project Areas disturbed by the Works and bears the cost of such work.

19.2.4 Topsoil set aside during initial earthworks pursuant to Sub-Clause 18.2 of the ESHS Specifications, is evenly spread over cleared areas. The surface of compacted soils on Project Areas is loosened by scouring (using rakes or other acceptable methods).

19.2.5 The Contractor describes in the Worskite - ESMP the planned revegetation works to ensure sustainable Project Area

rehabilitation: methods, plant species to be used and their origins, activity schedule based on a progressive taking over of Project Areas.

19.2.6 Prior approval by the Engineer is required regarding the origin of seeds and plants proposed by the Contractor. The species used for revegetation must be suitable for the local environmental conditions, and selected according to the rehabilitation program: stabilisation of backfill, landscaping, drainage, prevention of erosion, etc.

19.2.7 Revegetation is undertaken throughout the duration of construction Works, and is not limited to the rehabilitation of Project Areas at completion of the Works.

20 Documentation on the Project Area condition

20.1 The Constructor documents changes in condition of all Project Areas from the start of Works until the Performance Certificate is issued. Documentation comprises dated and geo-referenced colour photographs taken from a constant angle and viewpoint.

20.2 The Project Area condition is documented as a minimum for the following stages:

a) Before any Project Area disturbance at the start of works;

b) On completion of Works, but prior to starting rehabilitation;

c) On completion of rehabilitation and revegetation, if necessary, but prior to the Taking-Over Certificate issuing;

d) After the end of the Defects Notification Period and prior to the Performance Certificate issuing.

20.3 The Contractor specifies in the Worskite – ESMP: (i) the list of viewpoints to be used, (ii) areas to be photographed, and (iii) methods used for taking and archiving photographs.

20.4 Adjacent areas (100 m from the perimeter of the Project Area) are included in photographic documentation.

20.5 Unless instructed otherwise by the Engineer, structures to be buried are photographed weekly until covered. As a minimum the structures are photographed twice for Works with duration of less than 7 days, and at least once a week for Works with a longer duration.

20.6 Photographs subject to the present Clause 20 are archived in digital format and provided to the Engineer on a monthly basis under the CC Sub-Clause 4.21 monthly progress report.

20.7 The nomenclature of electronic files for photographs explicitly indicates the Project Area, date and structure documented.

C. Health & Safety

21 Health and Safety Plan

21.1 In application of Clauses 4 and 6 of the CC, the Contractor describes in the Health and Safety Plan section of the Worskite - ESMP its organisation for managing health and safety (section 7 of Worksite – ESMP as described in Appendix 1 to the ESHS Specifications), pursuant to its Health and Safety Management System (HSMS).

21.2 Pursuant to Clause 6 of the CC, the plan identifies and specifies:

a) All health and safety risks relating to the execution of the Works, by also identifying gender-specific risks;

b) Prevention and protection measures to control risks related to the execution of the Works, by differentiating, where necessary, measures concerning the protection of women and men;

c) Human and material resources involved;

d) Works requiring work permits; and

e) Emergency plans to be implemented in the case of an accident.

21.3 In addition, this Health and Safety Plan describes how workers are trained in health and safety aspects.

21.4 The Contractor implements prevention, protection and monitoring measures, as described in the Health and Safety Plan.

22 Daily and weekly meetings

22.1 The Contractor organises as a minimum one health and safety meeting per Project Area per week (or at another frequency approved by the Engineer) with all the personnel assigned to the Project Area. This applies only to Project Areas where work is ongoing. At the meeting accidents and incidents that occurred in the previous week are discussed and feedback provided. Means of improvements are identified, documented and assessed to establish corrective actions. The Engineer is invited to participate at all health and safety meetings. Meeting reports are provided to the Engineer.

22.2 The Contractor organises daily (or at another frequency approved by the Engineer) health and safety meetings per team at all Project Areas, prior to the start of the daily work. The meeting establishes the health and safety risks associated with the day's tasks and activities, and means of prevention and protection to be implemented. Minutes of the meetings shall be recorded.

23 Equipment and operating standards

23.1 The facilities and equipment used by the Contractor are installed, maintained, revised, inspected and tested pursuant to the manufacturer's recommendations. The recommendations are available in the language of communication defined under CC Sub-Clause 1.4 (or any other language approved by the Engineer).

23.2 The Contractor lists and describes in the Health and Safety Plan the national and international standards, guidelines and industry codes of practice, applied during the execution of works.

24 Work permit

24.1 Unless otherwise provided in the Contract, or unless otherwise instructed by the Engineer, work requiring work permits are defined in the Health and Safety Plan. Work permits will be documented and saved.

24.2 The Contractor puts in place a work permit procedure to manage risks through the implementation of prevention and protection

measures prior to the starting of work. This procedure is subject to validation by the Engineer.

25 Personal protective equipment

25.1 The Contractor ensures that all personnel, visitors or third parties entering a Project Area are equipped with Personal Protection Equipment (PPE) pursuant to the practices and standards specified in Clause 9.

25.2 The Contractor describes in the Health and Safety Plan the PPE to be used per Project Area and per activity.

25.3 Personnel and visitors to Project Areas are equipped with a safety helmet, safety shoes and a reflective jacket as a minimum.

25.4 Adequate quantities of PPE are available on the Project Areas. Storage conditions must be compatible with usage pursuant to the provisions of Sub-Clause 23.1 of the ESHS Specifications.

25.5 Contractor personnel are trained in how to use and care for PPE and the Engineer must be able to obtain the training reports.

26 Dangerous substances

26.1 A substance is considered dangerous if one or several of its properties render it dangerous, as defined in Appendix 2 to the ESHS Specifications. The Contractor identifies and manages dangerous substances planned for use on the Project Area in the manner described in the present Clause 26.

26.2 Details of risks and related prevention and protection measures are included in the Health and Safety Plan.

26.3 The assessment of the impact of the toxicity of dangerous substances on the reproductive functions of women and men must be taken into account.

26.4 The transport to the Project Area and use of dangerous substances requires prior authorisation from the Engineer.

26.5 The Contractor obtains all necessary authorisations and/or licenses for the storage and use of dangerous substances from local authorities. A copy of the authorisations is provided to the Engineer.

26.6 For each dangerous substance used, the Contractor will implement the recommendations described (i) in the Material Safety Data Sheets (MSDS), and (ii) by the Globally Harmonized System of Classification and Labelling of Chemicals established by the United Nations for hazardous chemicals.

26.7 Copies of MSDSs are kept on the Project Area, and made available to personnel. The Contractor's staff is aware of the health and safety risks related to hazardous materials. The Contractor provides the Engineer with copies of all MSDSs and training reports.

26.8 Storage of dangerous substances

26.8.1 Storage area are designed and equipped by the Contractor based on the chemical and physical properties of the substances, on the types of containers stored, the number of people requiring access, the ventilation requirements, the quantities of the substance used and potential chemical reaction with other substances (see Sub-Clause 26.8.5 of the ESHS Specifications).

26.8.2 Pursuant to Sub-Clause 15.6 of the ESHS Specifications, the Contractor anticipates and plans for the storage and management of hazardous waste.

26.8.3 Storage areas for dangerous substances are subject to strict rules, which are regularly checked by the ESHS Manager appointed pursuant to Sub-Clause 4.1.4 of the ESHS Specifications. The rules include the following as a minimum:

a) Access to the storage area is limited to trained and authorised individuals;

b) An inventory is maintained up-to-date;

c) MSDSs must be available for all stored dangerous substances, and the substances must be clearly labelled;

d) A strict and methodical storage system is implemented (storage plan posted, large or heavy packaging may not be stored at heights, equipment and tools may not be stored in the dangerous substance storage room);

e) Compliance with product expiry dates and implementation of a disposal procedure for substances which are not needed or which have expired;

f) Entrances, exits and access to emergency equipment are kept clear at all times.

26.8.4 Storage areas are clearly identified with warning signs at the entrance. The Contractor displays the storage plan (location of the different products, maximum inventory), a summary of labelling system and information on chemical incompatibilities.

26.8.5 Chemicals which could react together (leading to explosions, fire, projections or the emission of dangerous gases) are physically separated.

26.8.6 Products that react violently with water are stored so as to prevent contact with water, even in the event of flooding.

26.8.7 Inflammable products are stored separately in a dedicated area with adequate ventilation at all times.

26.8.8 Buildings used to store large quantities of dangerous substances are isolated from other buildings to avoid the spreading of fire. Such buildings are constructed using solid and non-combustible building materials, and are equipped with evacuation systems and the appropriate firefighting equipment. Access to the buildings is clear, allowing for rapid evacuation in the event of an accident. The electrical systems

are reduced to the essential minimum, and access points are equipped with adequate lighting (300 lux).

26.8.9 All storage areas are equipped with secondary retentions. Each storage area acts as a general secondary retention. Suitable absorbents (neutralising and non-combustible) are available in the storage area to clean up any spills and leaks.

26.8.10 The Contractor maintains the storage area at a suitable temperature for storing dangerous substances at an appropriate level to avoid any deterioration of the containers.

27 Planning for emergency situation

27.1 The emergency plan required in application of Sub-Clause 21.2 of the ESHS Specifications covers the following emergency situations as a minimum:

a) Fire or explosion;

b) Structural failure;

c) Loss of the containment of dangerous substances;

d) Safety incident or malicious act;

e) Natural disasters.

27.2 The Contractor details the emergency plan in the Health and Safety Plan.

27.3 The Contractor ensures that all personnel are informed and aware of how to react in an emergency situation, and responsibilities are defined. Information and awareness training are documented, and available on all Project Areas.

27.4 The Contractor organises and documents emergency simulation exercises within 3 months of the physical start of the Works, and subsequently once every 12 months up to the issue of the Taking-Over Certificate. The Engineer is invited to participate in each of these exercises.

27.5 Fire extinguishers are made available in each building at clearly identified locations.

28 Medical check-ups

28.1 The Contractor organises medical check-ups for all Contractor's Personnel prior to the initial mobilisation to the Project Area to check aptitude for the work. Medical check-ups are adapted to the anticipated occupied positions and carried out pursuant to the recommendations of the International Labour Organization. Subsequent to the check-up, a written medical certificate is issued declaring the aptitude of the worker for the allocated tasks.

28.2 Hearing tests are conducted for the Contractor's personnel exposed to specific risks (such as noise levels above 80 dB(A), exposure to hazardous materials, etc.) in order to establish an initial state of health. Annual tests are carried out to monitor any changes and detect any deterioration.

28.3 The Engineer can request additional medical examinations for the Contractor's Personnel if considered necessary, and all associated costs shall be borne by the Contractor.

28.4 A medical examination is carried out on any Contractor's Personnel returning to work after leave caused by a work related accident. A written medical certificate is issued confirming the Contractor's Personnel's aptitude to return to work at the designated workstation.

28.5 The Contractor can produce a copy of its Contractor's Personnel's work aptitude certificates at the request of the Engineer or any competent authority.

28.6 Specific arrangements for tasks' assignments or workstations shall be made for pregnant Personnel.

29 First aid

29.1 The Contractor ensures that at least one first aid officer is present at all times during working hours per Project Area and per team of 10 to 50 workers present, and one extra first aid officer for each additional 100 workers.

29.2 The Project Area must be equipped with a communication system available immediately and primarily for the purposes of communication with the first aid services. Information on how to communicate with the first aid services is clearly indicated near the communications equipment.

30 Health care centre & medical personnel

30.1 For Project Areas with more than 35 workers present at any one time and where it is not possible to reach a hospital, medical clinic or the Contractor's health centre within a period of 45 minutes, by land and in normal conditions:

30.1.1 The Contractor sets up a health care centre at its own cost. This centre is:

a) Operational and easy to access all times;

b) Kept clean and in good condition;

c) Equipped with appropriate heating or air-conditioning;

d) Equipped with sanitary facilities and drinking water;

e) Equipped with instruments, equipment, medicines and material required to examine and treat injured or sick workers in emergency conditions;

f) Equipped with the supplies and furnishing required to allow medical personnel to provide first aid and fulfil their other functions.

30.1.2 A doctor is present on-site at all times, working full-time during normal day hours. The doctor is on-call when more than 20 workers are working simultaneously outside of normal day hours.

30.1.3 The doctor has the following profile:

a) At least 5 years' experience on large-scale construction works at sites located at a distance from a hospital;

b) Trained in infectious diseases, waterborne and epidemiological diseases prevalent in the Employer's country;

c) Able to lead training sessions on occupational health and first aid;

d) Trained in management and logistics for a remote health care centre;

e) Able to speak the same working language used by most members of personnel fluently (communication in emergency situations);

f) In good physical condition, able to access remote working areas.

30.1.4 The Contractor allocates a road or air vehicle for first aid purposes to the first aid station pursuant to standard NF EN 1789/2007.

30.1.5 The Contractor ensures the presence of at least one nurse to assist the doctor per team with 200 - 800 workers allocated, and one extra nurse for each additional 600 workers allocated to this team. Over and above 500 workers per team, the Contractor ensures the presence of an extra doctor for each additional 500 workers allocated to this team.

31 First aid kits

31.1 Each Project Area must be equipped with an adequate number of first aid kits to ensure that all workers can access these kits in approximately 5 minutes. Kits must be available at all times.

31.2 Each vehicle is equipped with a first aid kit.

31.3 First aid equipment complies with attached specifications.

32 Emergency medical evacuations

32.1 The Contractor establishes, and provides the Engineer within one month of the physical start of works a copy of an agreement with a specialised company for the handling of personnel in the event of a serious accident requiring an emergency medical evacuation, which

cannot be organised using the first aid vehicle specified in Sub-Clause 30.1.4 of the ESHS Specifications without endangering the life of the patient.

32.2 The agreement includes a convention with a referring hospital where the member of personnel evacuated in emergency conditions will be treated.

32.3 The agreement covers the use of air transportation in order to evacuate the injured patient(s) to the referring hospital.

33 Access to health care

33.1 The Contractor guarantees access to health care as defined in Clause 30 for all personnel in necessary cases of accident or illness occurring during the execution of the Works, i.e.:

a) Medical check-ups: initial (recruitment), annual and upon returning to work after sick leave;

b) Screening, vaccinations and preventive healthcare;

c) General healthcare during the execution of the Works;

d) Medical assistance in the event of an accident and assistance for emergency evacuations.

33.2 Subcontractor's personnel, other contractors, the Employer or the Engineer, present at the Project Area, must never be refused medical assistance, under the pretext that they are not directly employed by the Contractor. The Contractor may however define a unit rate cost per medical act for personnel, other than its own Contractor's Personnel, display this rate in the healthcare centre and forward the information to the Engineer.

33.3 In the event of accident or serious illness, medical personnel must be trained, available and equipped with the necessary material, medicines and consumables to provide first aid for the patient, stabilise their condition, until the patient is:

a) Either treated or discharged; or

b) Hospitalized at the camp or in a larger hospital; or

c) Evacuated to a medical centre which is well equipped for intensive care, if necessary.

34 Health monitoring

34.1 The Contractor cannot recruit workers in poor health.

34.2 The initial pre-recruitment examination must confirm that applicants carry no infectious diseases and are physically able to carry out the tasks required for the position.

34.3 The detection of pregnancy during the initial pre-recruitment examination of female applicants shall not constitute grounds for declining recruitment, unless medical risk is proven.

34.4 The Contractor organises annual medical check-ups for its Contractor's Personnel and keeps up to date a medical record for each Contractor's Personnel. The presence of Contractor's Personnel for medical check-ups, treatment and hospitalisation is incorporated into the Contractor's planning.

34.5 The Contractor provides the Contractor's Personnel with prophylaxis and vaccinations against local diseases and vectors. In particular, the Contractor will promote the use of impregnated mosquito nets by its Contractor's Personnel in camps or off-site lodging, and distributes these nets appropriately.

34.6 The Health and Safety Plan includes a Contractor's Personnel health risk assessment based on exposure to specific risks (such as noise levels above 80dB(A), exposure to hazardous materials, etc.) and describes the medical monitoring implemented.

35 Sanitary repatriation

35.1 The Contractor is responsible for the sanitary repatriation of Contractor's Personnel in the event of a serious injury or illness. The Contractor will take out the necessary insurance to cover the cost of the sanitary repatriation of its Contractor's Personnel.

36 Hygiene, accommodation and food

36.1 Drinking water:

36.1.1 Pursuant to Sub-Clause 6.14 of the CC, the Contractor provides personnel with drinking water at all Project Areas. The quantity and quality of this water complies with the standards of the World Health Organization at supply points.

36.1.2 Unless the supply of drinking water is provided by a certified supplier, the quality of the drinking water provided to workers is tested at least at the start of the Works and then on a monthly basis. The protocol for taking and analysing samples is based on the recommendations of the World Health Organization. The results shall be documented and made available on the Project Areas.

36.2 Accommodation conditions:

36.2.1 The accommodation provided for non-resident Personnel in a camp or an alternative structure outside of the Project Areas, such as a hotel or rented house, will comply with the conditions of Sub-Clause 36.2 of the ESHS Specifications in pursuance of Sub-Clause 6.6 of the CC.

36.2.2 Unless specified otherwise in the Contract, or instructed otherwise by the Engineer, Personnel are housed in rooms. Rooms do not host more than 4 individuals, with no bunk beds, and with 0.5 m3 of storage space available per person.

36.2.3 Rooms shall not be mixed: separate rooms must be made available for both men and women.

36.2.4 Rooms are lit and equipped with power sockets, beds and windows fitted with mosquito nets. Flooring is of a hard and impervious material.

36.2.5 The temperature in rooms and common areas shall be kept at an appropriate level during occupied hours.

36.2.6 Night-time noise levels to which personnel are exposed comply with the limits recommended by the World Health Organization.

36.2.7 The Contractor provides one drinking water tap per 10 Contractor's Personnel, one shower per 10 Contractor's Personnel as a minimum, one individual toilet for 15 Contractor's Personnel as a minimum, and one urinal per 25 Contractor's Personnel at accommodation camps. Separate showers, toilets and locker-rooms must be made available for women.

36.2.8 The Contractor constructs and maintains a shared leisure area in each camp and a sports field for use by Personnel.

36.3 Hygiene in shared areas:

36.3.1 Sanitary areas (showers, sinks, urinals, toilets) are cleaned and disinfected by the Contractor's cleaning service at least once every 24 hours. Cleaning operations are documented.

36.3.2 The canteen, kitchen and kitchen utensils are cleaned after each meal service.

36.3.3 The number and location of toilets on Project Areas shall be adapted to the number of employees and the configuration of the Project Areas (distance, isolated area, etc.). Separate toilets will be made available for women.

36.4 Food:

36.4.1 In application of Sub-Clause 6.13 of the CC and Sub-Clause 41.1 of the ESHS Specifications, the Contractor provides meals at a reasonable cost to its Contractor's Personnel in a canteen area and according to a procurement system which complies with the provisions of Sub-Clause 36.4 of the ESHS Specifications.

36.4.2 The Contractor defines and implements actions in order to guarantee (i) the quality and quantities of food stuffs, (ii) compliance with health rules when preparing meals, (iii) fitting out and servicing premises and equipment, both in the kitchen and food storage areas.

36.4.3 The Contractor inspects the cleanliness of food transport vehicles, temperature control and the cold chain, as well as best before dates, and takes the necessary corrective actions. The temperatures of chillers are regularly checked.

36.4.4 The Contractor checks that health requirements are met for food storage conditions in the kitchen or other locations, food cooking times and temperatures, and the conditions in which prepared products are left prior to consumption, to ensure no health risks. No food remains are to be reused.

36.4.5 The Contractor recruits trained canteen personnel and ensures that supervisors monitor compliance with sanitary instructions. The Contractor ensures that canteen personnel have means of ensuring compliance with health rules (changing rooms, linen, hand washers, the condition of flooring and paint, and the existence of a cleaning plan).

36.5 The ESHS Manager carries out an audit on all Project Areas every 3 months, and documents the results, and includes the conditions of hygiene in which meals are prepared and food conserved. The results of this audit are provided to the Engineer.

36.6 The ESHS Manager regularly informs Contractor’s Personnel on appropriate behaviour in terms of workplace hygiene. This information is documented and saved.

37 Substance abuse

37.1 Pursuant to Sub-Clause 6.16 of the CC, the use, possession, distribution or sale of illegal drugs, controlled substances (as per local regulations) and alcohol is totally prohibited on the Project Areas. The Contractor implements a zero tolerance policy for the consumption of these substances.

37.2 Any person suspected by the Engineer to be under the influence of alcohol or controlled substances on any Project Area is immediately suspended from his position by the Contractor, pending the results of medical tests.

D. Local Labour and Relations with Local Communities

38 Labour conditions

38.1 The Contractor should ensure decent labour conditions for workers and notably compliance with applicable law and regulations in the country of implementation of the contract, and with the fundamental conventions of the International Labour Organisation (ILO). This includes workers' rights related to wages, working hours, rest and leave, overtime, minimum age, regular payment, compensation and benefits. The Contractor should respect and facilitate workers' rights to organise and provide a grievance mechanism for all direct and indirect workers. The Contractor should implement non-discrimination and equal opportunity practices, and ensure prohibition of child or forced labour.

39 Local recruitment

39.1 Local recruitment is defined as the number of positions actually allocated to people residing in the region of the Works, which must be defined by the Contractor in its offer according to relevant criteria by giving priority to populations living in the area of influence or in the immediate proximity of the Project Area.

39.2 Pursuant to Sub-Clause 6.1 of the CC, the Contractor implements a voluntary local recruitment policy for its personnel for the duration of the Works and shall enforce this policy to its Subcontractors.

39.3 The Contractor demonstrates the effective implementation of this voluntary policy to the Engineer in its monthly activity report as defined in Sub-Clause 6.3 of the ESHS Specifications.

39.4 Pursuant to Clause 8 of the ESHS Specifications, the Contractor shall develop a training program. This training program must be open to women and men and be adapted to their level of education and needs of each group to occupy the positions proposed during the Works.

39.5 Local labour needs are estimated prior to the start of Works and described in the Worskite - ESMP with the following information:

a) Identification of positions that could be filled by local staff and the level of qualification required;

b) Definition of the planned procedure for the effective recruitment of these members of staff;

c) Establishment of mechanisms to ensure non-discrimination of women in accessing recruitment procedures. This mechanism must cover the definition of the positions, the methods of communication on the positions to be filled, etc.;

d) Deployment schedule for these positions;

e) Initial training to be provided by the Contractor for each job description.

39.6 In order to prevent outsiders from entering the Project Area, local recruitment at the Project Area, including at the entrance, is prohibited.

39.7 Local recruitment office:

39.7.1 Prior to the start of works, the Contractor establishes a local recruitment office in the district where the main Project Area is located, at a location pre-approved by the Engineer.

39.7.2 A representative of the Contractor is present in this office at least two mornings each week, from the start of the Works to a date pre-approved by the Engineer.

39.7.3 The representative provides information on job vacancies with the Contractor for the execution of the Works (required qualifications, duration, and location) and on the information to be provided in applications.

39.7.4 Lists of local candidates are drafted by the representative allocated to the office and forwarded to the Contractor's humans resources manager on a weekly basis.

39.8 The Contractor's Human Resources manager selects candidates listed by the local recruitment office based on requirements for the Works and the Contractor's recruitment procedures. A written contract between the Contractor and the local Contractor's Personnel is drafted, signed and archived by the Contractor.

39.9 If the Project Areas are located near to several different communities, the Human Resources manager ensures a fair distribution of local recruitment between the different communities, by giving priority to the people affected by the project.

39.10 The Human Resources manager will ensure that recruitment campaigns in local communities have been spread to women and that the latter have not been discriminated in recruitments.

39.11 Pursuant to Sub-Clause 6.22 of the CC, the Contractor maintains one record per local Contractor's Personnel indicating the hours worked per person allocated to the Works, the type of tasks carried out, the wages paid and any training taken. Records are available at the main Project Area at all times, so the Engineer and the authorised representatives of the government can assess the content.

40 Transport & accommodation

40.1 Unless specified otherwise in the Contract, or instructed otherwise by the Engineer, the Contractor provides or enables access to daily transport for Contractor's Personnel living more than 15 minutes' walk from the Project Area and more than one hour by land transport.

40.2 The transport is organised under conditions which comply with local regulations and which ensure the safety of the people transported.

40.3 The Contractor organises collective transport: pick-up times and locations are defined and services organised appropriately.

40.4 If the Project Area is moved during the working season and if the Contractor retains the local personnel trained at the start of the Works, the accommodation of the Contractor's Personnel is managed by the Contractor:

a) Within a mobile camp with the other non-local Contractor's Personnel; or

b) In villages located near to the mobile Project Area, in this case, each local Contractor's Personnel will receive a housing allowance in addition to his wages.

41 Meals

41.1 Food supplies for the meals of the Contractor personnel will exclude any meat obtained from hunting or poaching, with the exception of fish.

41.2 The Contractor provides at least two meals per day to local Contractor's Personnel pursuant to the hygiene conditions specified in Clause 36 of the ESHS Specifications, at reasonable price.

42 Damage to people and property

42.1 The Contractor shall not disturb or interfere with the inhabitants of local communities close to or in the Project Area, and shall respect their houses, cultures, animals, properties, customs and practices.

42.2 Pursuant to Sub-Clauses 4.14 and 17.1 of the CC, the Contractor is responsible for damages to people and property caused by the execution of the Works or the procedures used for execution.

42.3 Access to the Project Areas is prohibited to unauthorized persons. The Contractor is responsible for the security and access control of the Project Areas.

42.4 The Engineer is informed of any damage caused to people, or the property of individuals, other than the Contractor's personnel, within 6 hours of the event, regardless of the value of the prejudice.

42.5 Housing existing before the start of the Works, located within a minimum radius of 800 m around the perimeter of the quarries and within a minimum radius of 500 m around the other Project Areas

that will be subject to blasting, will be examined by a bailiff unless agreed upon otherwise with the Engineer.

42.6 The bailiff's sworn statement is prepared and provided to the Engineer with the EPP.

42.7 Should any problems be detected due to the intensity of blasting, the Engineer is entitled to request that the Contractor carry out seismic measurements of the intensity of the vibrations induced by the blasting, at variable distances from the blasting points, under the supervision of the Engineer, and at the cost of the Contractor.

43 Land acquisition and land take

43.1 Pursuant to Sub-Clause 7.8 of the CC, the Contractor will cover (i) occupancy indemnities for the extraction or use of construction materials and (ii) the cost of acquiring or temporarily occupying the necessary land to stockpile excess backfill material.

43.2 The Contractor provides compensation for any prejudice suffered by the owners and users of this land, if these users are not the same parties as the owners.

43.3 The Contractor demonstrates to the Engineer (i) who are the owner and the users, if different parties have been identified, and (ii) a written agreement governing the temporary occupancy or acquisition of this land has been negotiated and duly paid up to the two parties, if different.

44 Traffic

44.1 The Contractor defines a Traffic Management Plan in Worksite - ESMP (section 11 as defined in Appendix 1 to the ESHS Specifications).

44.2 The Traffic Management Plan:

a) includes the characteristics of its fleet of vehicles and site machinery; and

b) defines the itineraries used on a map for each route between the different Project Areas that must be validated by the Engineer.

44.3 The Contractor requests that the Employer obtain the authorisations of the competent administrative authorities if public roads are used. Any Engineer’s instruction to update the Traffic Management Plan shall be implemented.

44.4 Within one month of the physical start of Works, the Contractor informs the administrative authorities of areas crossed by the Contractor’s vehicles, of the itinerary and characteristics (frequency of passing, size and weight of trucks, materials carried) of the Contractor's fleet of vehicles.

44.5 If public roads are used, and unless approved otherwise by the Engineer, the Contractor mandates a bailiff to make a sworn report regarding the state of the road prior to use by the Contractor's vehicles. The report is annexed to the Traffic Management Plan.

44.6 The Contractor describes in the Traffic Management Plan the expected traffic created by its fleet of vehicles (frequency of trips between Project Areas, working hours, convoys).

44.7 The Contractor also describes the number and positioning of flagmen.

44.8 Unless specified otherwise in the Contract or instructed otherwise by the Engineer, heavy vehicles (i.e. with a GVWR of more than 3.5 tons) may not be used at night between 22:00 and 06:00.

44.9 Speed limits:

44.9.1 The Contractor takes action to limit and check the speed of all vehicles and machinery used to execute the Works.

44.9.2 The maximum speed of all machinery and vehicles of the Contractor comply with the lowest of the following: the speed limit defined according to the Employer’s country regulations or the following limits.

a) 10 km/h within the Project Area;

b) 30 km/h in villages or hamlets, in towns, from 100 m before the first house;

c) 80 km/h on unpaved roads outside of towns, villages, hamlets and camps.

44.9.3 Pursuant to Sub-Clause 4.15 of the CC, and in coordination with the competent Employer's country authorities, the Contractor provides and installs signs for the fleet of vehicles along public roads, when public signs are inadequate.

44.9.4 The Contractor provides each of its drivers with a map at the appropriate scale of the roads authorised for the execution of the Works, clearly indicating the maximum speeds authorised, and ensures their understanding.

44.10 It is strictly prohibited to transport people, equipment or products other than those required for the Works and the management of Project Areas, on board any of the Contractor's vehicles. This provision also applies to the transport of live animals and meat obtained from hunting, fishing or poaching.

44.11 The trailers and skips used to carry materials which could be projected (sand, crushed material, aggregates, selected materials) are covered with a tarpaulin for the entire itinerary between two Project Areas.

44.12 The Contractor carries out regular inspections along the roads used by its fleet of vehicles to ensure compliance with the provisions of Clauses 44.8 to 44.11 of the ESHS Specifications. The Contractor records these inspections and the results and transmits a summary of checks carried out for the previous month to the Engineer on a monthly basis.

APPENDIX 1 – Contents of Worksite ESMP

1. **Environmental policy**
   - Declaration of ESHS policy signed by the managing director of the Contractor and clearly defining the commitment of the Contractor in terms of (i) ESHS management for its construction sites and (ii) compliance with the ESHS Specifications of the Contract.
2. **Worksite -ESMP**
   - Target and content of the Worksite Environmental and Social Management Plan
   - Preparation and updating schedule
   - Quality assurance and validation
3. **ESHS resources**
   - Human resources:
     - ESHS Manager
     - ESHS Supervisors
     - Person in charge of relations with stakeholders
   - Logistics & communications:
     - ESHS vehicles
     - IT stations
     - In situ noise, air and water measuring equipment
   - Reporting:
     - Weekly inspections
     - Monthly
     - Accident / Incident
4. **ESHS regulations**
   - Definition of standards for the applicable national ESHS regulations and the ESHS recommendations of institutions affiliated to the United Nations (WHO, ILO, IMO, IFC), applicable to the execution of works:
     - Discharge standards
     - Minimum wage
     - Day and/or night traffic restrictions
     - Other
   - Definition of ESHS standards for the industry applied
5. **ESHS operational inspection resources**
   - Site tracking procedure:
     - Frequency
     - Personnel

		– Assessment criteria ➢ Non-conformity handling and detection procedure: – Distribution information – Notification depending on the level of importance allocated to non-conformities – Tracking of the closing of the non-conformities ➢ Management of data on tracking and non-conformities: – Archiving – Use as a performance indicator
6.	**Project Areas**	➢ Description of Project Areas (as per definition in Sub-Clause 1.3 of the ESHS Specifications): – Number – Location on a topographical map – Activities – Opening & closing schedule – Access
7.	**Health and Safety Plan**	➢ Identification and characterization of health and safety risks, including the exposure of personnel to chemicals, biological hazards and radiation ➢ Description of working methods to minimize hazards and control risks ➢ List of the types of work for which a work permit is required. ➢ Personal protection equipment. ➢ Evacuation procedure for medical emergencies. ➢ Description of the internal organization and action to be taken in the event of an accident or incident.
8.	**Training plan**	➢ Basic training for non-qualified staff ➢ Health & safety training
9.	**Labor Conditions**	➢ Description of Human Resource Policy for construction works of direct and indirect workers
10.	**Local recruitment**	➢ Local labour requirements: – Job descriptions and the levels of qualifications required

- Recruitment procedure and deployment schedule
- Initial training to be provided by the Contractor for each job description

11. **Traffic Management Plan**
    - Description of the fleet of vehicles/machinery used for the execution of the Works
    - Deployment (Project Area & schedule) and maintenance sites for each vehicle and machine
    - Mapping of itineraries, travel times, and areas where speeds are limited

12. **Dangerous products**
    - Inventory of dangerous products per Project Area and per period
    - Transport and storage conditions and chemical incompatibility

13. **Noise and vibrations**
    - Estimation of the frequencies, duration, days of the week and noise levels per Project Area

14. **Waste**
    - Inventory of waste per Project Area and per period
    - Collection, intermediate storage, handling and treatment methods for ordinary or inert waste
    - Storage and handling methods for dangerous waste

15. **Clearing and revegetation**
    - Methods & schedule for clearing vegetation and earthwork activities
    - Methods, species and schedule for the revegetation of Project Areas disturbed by the Works

16. **Biodiversity**
    - Schedule for adequate fauna and flora management
    - Measures for minimizing impact on fauna and flora species based on the Contracting Authority procedures
    - Measures for monitoring the efficiency and performance of the plan in place
    - Measures for limiting IAS
    - Measures for monitoring the efficiency and performance of the plan in place

17. **Prevention of erosion**
    - Location of zones suffering from erosion
    - Methods and schedule for the implementation of anti-erosive actions, including topsoil storage

18. **Documentation on the Project Area condition**
    - List and cover of viewpoints
    - Imaging method
    - Archiving photographs
19. **Rehabilitation**
    - Method and schedule for Project Area rehabilitation
20. **Appendices**
    - Environment Protection Plans (number and location specified in Section 6 “Project Areas” above):
      - Marking out of the Project Area perimeter on a map
      - Definition of zones for vegetation clearing, zones for the storage of usable timber
      - Definition of on-site activities: construction, storage areas, accommodation areas, offices
      - Layout of activity areas on the Project Area: construction works, production/operation areas, rehabilitation and closure
      - Access routes and checkpoints
      - Project Area occupancy schedule
      - Organisation of Project Area preparation
      - Location of the storage site for dangerous products
      - Location and mapping of waste treatment facilities when handled by an external service provider
      - Any other information relating to the environmental management of the Project Area
    - Emergency plan:
      - Description of facilities
      - Characterisation of hazards
      - Emergency situations
      - Organisation structure - roles and responsibilities
      - Emergency procedures
      - Human and material resources
      - Triggering of the plan
      - Reporting

- Bailiff's sworn reports as specified in Sub-Clauses 10.5, 42.4 and 44.5 of the ESHS Specifications.

APPENDIX 2 – Properties rendering a product dangerous[17]

1.	**Explosive**	substances and preparations which could explode in the presence of a flame or which are more sensitive to impacts and friction than dinitrobenzene.
2.	**Combustive**	substances and preparations which, when in contact with other substances, particularly inflammable substances, undergo strongly exothermic reactions.
3.	**Easily inflammable**	substances and preparations (i) in liquid phase (including extremely inflammable liquids), with a flash point below 21°C, or which can heat up to the extent of spontaneous combustion in ambient air; or (ii) in solid phase, which can burst into flames easily in the brief presence of a source of inflammation and which will continue to burn after the removal of the source of inflammation or (iii) in gaseous phase, which are inflammable in air at normal pressure; or (iv) - which, when in contact with moist air or water, produce dangerous quantities of gases which are easily inflammable.
4.	**Inflammable**	liquid substances and preparations, with a flash point equal to or above 21°C and less than or equal to 55°C.
5.	**Irritant**	non-corrosive substances and preparations which, when in immediate, extended or repeated contact with the skin and mucosa, can cause inflammation.
6.	**Harmful**	substances and preparations which, in case of inhaling, swallowing or cutaneous penetration, can lead to risks of limited severity.
7.	**Toxic**	substances and preparations (including highly toxic substances and preparations), which, in case of inhaling, swallowing or cutaneous penetration, can lead to serious, acute or chronic risks, and even death.
8.	**Carcinogenic**	substances and preparations which, in case of inhaling, swallowing or cutaneous penetration, can lead to or increase the frequency of cancer.
9.	**Corrosive**	substances and preparations which, in case of contact with living tissues, can destroy the latter.
10.	**Infectious**	substances containing viable micro-organisms or their toxins, for which it is known or we have good reasons to believe that they cause disease in humans or other living organisms.
11.	**Harmful to reproduction function**	substances and preparations which, in case of inhaling, swallowing or cutaneous penetration, can induce or increase the frequency of undesirable non-hereditary effects in offspring or have a negative effect on reproductive functions and abilities.

[17] Source: French Environment Law (*Code de l'environnement*) / Articles R541-8

12.	**Mutagenic**	substances and preparations which, in case of inhaling, swallowing or cutaneous penetration, can lead to hereditary genetic disorders or increase the frequency of these disorders.
13.	**React with water**	substances and preparations which, in case of contact with water, air or an acid, release a toxic or highly toxic gas.
14.	**Sensitising**	substances and preparations which, in case of inhaling or cutaneous penetration, can lead to a hypersensitisation, so that renewed exposure to the substance or preparation will cause characteristic harmful effects. This property can only be considered if test methods are available.
15.	**Ecotoxic**	substances and preparations with inherent or potential immediate or deferred risks for one or several environmental components.
16.	**Dangerous for the environment**	substances and preparations which are likely, after elimination, to lead to another substance, by any means, e.g. a lixiviation product, with one of the above characteristics.

D. **ENVIRONMENTAL & SOCIAL MANAGEMENT FRAMEWORK**

KENYA POWER DISTRIBUTION LAST MILE CONNECTIVITY PROJECT (AFD/EU/EIB)

ENVIRONMENTAL & SOCIAL MANAGEMENT FRAMEWORK

BASIC INFORMATION

1. Project Name: Kenya Power Distribution Last Mile Connectivity Project (AFD/EU/EIB)
2. Project Development Objective: To expand power distribution system to be within reach and enable more Kenyans to connect to the grid
3. Expected Project Benefits: Beneficiaries will mostly be households, business enterprises and small commercial buildings in rural and peri-urban areas that will be connected to the electricity network for the first time. First time connection of new customers will include installation of 940 new transformers (complete with maximization for full connection to customers within reach) and maximization of low voltage network complete with service cable connections to customers for 3,735 existing transformers. This project is expected to connect about 280,475 new c**ustomers to electricity -** customers from underutilized transformers. Kenya Power & Lighting Company Ltd (KPLC) will be a beneficiary through the service connection component**.**
4**. Identified Project Social Risks:** Minimal adverse social risks are anticipated under this project because the installation of Distribution systems will take place within existing routes and road reserves. The project will experience social risks under the service connection component that shall also include stringing of distribution lines. The majority of low and medium voltage lines will mainly be constructed along the road reserve and existing rights of ways. The project will not trigger physical relocation of People and damaged vegetation will be treated as a give back by the beneficiary community hence no compensation. Way leaves consent will be obtained by the contractor during project implementation.
Recipient: Government of Kenya – Ministry of Energy and Petroleum
Responsible Government/Country Agency for ESMF Implementation: Ministry of Energy (MoE) and Kenya Power and Lighting Company Limited (KPLC)
Total Project Cost (EUR million): 180 Million EUR
Date ESMF was Prepared: March, 2019

The Environmental & Social Management Framework (ESMF) has been prepared by the Environment & Social Unit, Safety, Health & Environment (SHE) Department, Kenya Power. The ESMF has been prepared based on an overall outlook of the Environmental, Social, Health and Safety issues of the AFD/EU/EIB LMCP, which includes:

- The general baseline at project areas.
- Evaluation of potential Environmental, Social, Health and Safety impacts of different project components and subcomponents, and
- Assessment of environmental practices in different ongoing and completed projects.

The ESMF provides the guidelines for the preparation of all mitigation plans (Environmental, Social, Health and Safety Management Plans and Construction Management Plan) to respond to the anticipated project impacts, once the project specific sites and routes locations are identified.

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LIST OF ACRONYMS AND DEFINITIONS

AFD	Agence Française de Développement
AIDS	Acquired Immunodeficiency Syndrome
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EMCA	Environmental Management Act – 1996
ESAP	Environmental and Social Assessment Procedures
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESSF	Environmental and Social Screening Form
EU	European Union
HIV	Human Immunodeficiency Virus
KP	Kenya Power
KPLC	Kenya Power& Lighting Company Ltd
LMCP	Last Mile Connectivity Project
NEC	National Environment Council
PBO	Project Based Programs
RAP	Resettlement Action Plan
RoW	Right of Way
PCB	polychlorinated biphenyl
PIT	Project Implementation Team
SESA	Strategic Environmental & Social Assessment
SHE	Safety, Health & Environment
ToR	Terms of Reference
UN	United Nations
UNCLOS	UN Convention on the Law of the Sea

WRMA Water Resources Management Authority
MoE Ministry of Energy
EPRA - The Energy and Petroleum Regulatory Authority
REREC - Rural Electrification and Renewable Energy Corporation
NPEA - Nuclear Power and Energy Agency
Site – This will be taken to refer a transformer (either new or existing)

EXECUTIVE SUMMARY

Background

The country's long-term development blue print, Vision 2030 aims at transforming Kenya into a globally competitive newly industrialized middle income and prosperous country. The Second Medium Plan 2013-2017 identifies energy as one of the enablers for transformation into "a newly-industrializing, middle-income country providing a high quality of life to all its citizens in a clean and secure environment". Efficient, accessible and reliable infrastructure is identified as an enabler for achieving sustainable economic growth, development and poverty reduction by lowering the cost of doing business and improving the country's global competitiveness.

The Government of the Republic of Kenya has received financial support from the European Union, Agence Francaise de Developpement and European Investment Bank for this Last Mile Connectivity Project which covers 32 counties. The proposed project shall be implemented in 18 months' period. Actual construction work on site is expected to commence during the third quarter of 2023.

Purpose of ESMF

The purpose of the ESMF is to provide a procedure for environmental and social assessment of the proposed AFD/EU/EIB Last Mile Connectivity Project. ESMF was selected because even though the footprint of the project is known, design and other details about the investment are not available prior to appraisal of the project. ESMF will guide KPLC in determining the appropriate level of environmental and social assessment required for the proposed AFD/EU/EIB LMCP and in preparing the necessary environmental and social mitigation measures for the project during the preconstruction, construction and operational phases

AFD/EU/EIB LMCP Project Objectives

The proposed project development objectives (PDOs) are: (a) to increase access to electricity by Kenyans; and (b) to expand KPLC's customer base.

Specific ESMF objectives

The Environmental and Social Management Framework (ESMF) provides a logical framework within which potential negative environmental and socio–economic impacts shall be mitigated and monitored. In addition, the ESMF assigns responsibilities of actions to various actors and provides a timeframe within which mitigation measures and monitoring shall be done.

Once the specific project sites are identified, The Contractor shall fill Environmental and Social screening forms provided by KPLC. The filled Screening forms will be reviewed by the Consultant and approved by KPLC after which the contractor will develop site specific construction ESMPs detailing potential environmental, Social and Safety risks and their mitigation measures. The site Specific ESMPs will also be reviewed by the Consultant and approved by KPLC. The ESMF will also support and empower Kenya Power and Lighting Company officers to carry out the environmental, Social and Safety Monitoring of the project by checking the level of compliance by the Contractor to the ESMPs nd to give guidance to contractors and consultants on how to handle the main risks identified.

AFD/EU/EIB LAST MILE CONNECTIVITY PROJECT DESCRIPTION

AFD/EU/EIB project scope and components

The proposed project will entail Extension of 33 KV and 11 KV lines, service connection, and installation of distribution transformers. The contractors will provide the designs of the extensions of the 33 and 11KV lines after which KPLC will carry out Screening and generate Site specific ESMPs. The Low voltage lines will have little or no Environmental issues since PVC Cables will be used. The project will geographically cover thirty-two counties selected nationally including Nandi, Uasin Gishu, Trans Nzoia, Bungoma, West Pokot, Kisumu, Siaya, Vihiga, Busia, Kakamega, Homabay, Kisii, Migori, Nyamira, Bomet, Kericho, Nyandarua, Nakuru, Narok, Laikipia, Nyeri, Embu, Kirinyaga, Murangá, Meru, Tharaka Nithi, Kajiado, Makueni, Kitui, Kilifi, Kwale and Taita Taveta.

The entire project is divided into two components: Service Connection and installation of distribution transformers. Service connection will include erection of poles and stringing of low voltage lines, installation of single core concentric cable and installation of electronic pre-paid energy meters. The identified thirty-two counties shall benefit from all the components of the AFD/EU/EIB LMCP. The counties identified have been categorized in ten lots for implementation purposes.

DISTRIBUTION OF MAXIMIZATION AND NEW (AND ASSOCIATED 11KV & 33KV LINES) TRANSFORMERS UNDER AFD/EU/EIB LMCP

The following table shows the distribution of both maximization and new (and the associated 11kv & 33kv lines) transformers across the thirty-two (32) counties;

DISTRIBUTION OF MAXIMIZATION AND NEW (AND ASSOCIATED 11KV & 33KV LINES) TRANSFORMERS			
No.	**COUNTY**	**NEW TRANSFORMERS AND ASSOCIATED 1KM OF 11/33KV HT LINES**	**TRANSFORMERS FOR MAXIMIZATION**
1.	BOMET	8	102
2.	BUNGOMA	37	267
3.	BUSIA	13	135
4.	EMBU	6	74
5.	HOMA BAY	43	201
6.	KAJIADO	4	48
7.	KAKAMEGA	59	333
8.	KERICHO	25	82
9.	KILIFI	16	157
10.	KIRINYAGA	4	53
11.	KISII	26	176
12.	KISUMU	8	103
13.	KITUI	87	180
14.	KWALE	9	115
15.	LAIKIPIA	4	47
16.	MAKUENI	32	151
17.	MERU	53	205
18.	MIGORI	61	174
19.	MURANG'A	8	109
20.	NAKURU	22	180
21.	NANDI	11	137

DISTRIBUTION OF MAXIMIZATION AND NEW (AND ASSOCIATED 11KV & 33KV LINES) TRANSFORMERS			
No.	**COUNTY**	**NEW TRANSFORMERS AND ASSOCIATED 1KM OF 11/33KV HT LINES**	**TRANSFORMERS FOR MAXIMIZATION**
22.	NAROK	134	71
23.	NYAMIRA	5	64
24.	NYANDARUA	6	74
25.	NYERI	6	74
26.	SIAYA	10	137
27.	TAITA TAVETA	4	55
28.	THARAKA - NITHI	23	36
29.	TRANS NZOIA	10	76
30.	UASIN GISHU	5	59
31.	VIHIGA	15	60
32.	WEST POKOT	189	31
	TOTAL	940	3765

Methodology used

This was done through a thorough review of the project concept paper, project development objective and key indicators, project components, project target areas, institutional and implementation arrangements, and monitoring and evaluation of outcomes. The review also covered Kenya's policy, legal, regulatory and administrative frameworks relevant to the proposed AFD/EU/EIB Last Mile Connectivity Project. The World Bank Operational Safeguard Policies were reviewed to identify the likely policies to be triggered by subprojects.

Bearing in mind that AFD/EU/EIB LMCP subproject sites were not definitively identified at the time of the preparation of this ESMF, the literature reviews further encompassed the overview of Kenya's physiographic and climatic issues, the state of the general environment and population and population dynamics throughout the country.

Baseline information

This section describes the overall baseline condition of Kenya in terms of the bio-physical, socio-economic and cultural environment. The proposed project will be rolled out across selected thirty-two (32) counties hence the baseline information presented is for the specific proposed project areas within specific screening reports.

Regulatory, Administrative and Legal Framework

A detailed review of relevant institutional and legal as well as policy framework that bears significance or implication to the AFD/EU/EIB LMCP is presented in this chapter of the ESMF report. The European Investment Bank Environmental and Social Standards applicable to the project as well as the international laws and conventions that bear relevance to the implementation of this project have also been highlighted in this chapter.

In Kenya, The Environmental Management and Co-ordination Act, No.8 of 1999 provides for the establishment of an appropriate legal and institutional framework for the management of the environment and associated matters.

The activities in the AFD/EU/EIB Last Mile Connectivity Project are for the moment expected to trigger the following EIB Environmental and Social Standards: 8 (Labour Standards) 9 (Occupational and Public Health Safety and Security and 10 (Stakeholder Engagement). The standards instruments prepared for any subprojects will address the requirements of any applicable policies.

Table 1: EIB Environmental and Social Standards triggered by AFD/EU/EIB LMCP

EIB ENVIRONMENTAL AND SOCIAL STANDARDS TRIGGERED BY THE AFD/EU/EIB LMCP	YES	NO	REMARKS
01: Assessment and Management of Environmental and Social Impacts and Risks	X		E&S screening will inform
02: Pollution Prevention and Abatement	X		Minor impacts maybe of oil spillage from Vehicles, conductor offcuts, Packaging materials
03: EIB Standards on Biodiversity and Ecosystems	X		
04: EIB Climate-Related Standards		X	
05: Cultural Heritage	X		Chance find and contractors to inform Consultant, KPLC and National Museums of Kenya.
06: Involuntary Resettlement	X		Trees and crop compensation
07: Rights and Interests of Vulnerable Groups	X		No partiality.
08: Labour Standards	X		Working hours, Under-age, gender,pay
09: Occupational and Public Health Safety and Security	X		Working in Energized power systems, at heights, PPEs
10: Stakeholder Engagement	X		Continuous consultations will be progressed.

Environmental and Social Impacts

Benefits/Positive impacts

- Up Scaling Electricity Access to the Poor
- Expected Impact on Poverty Alleviation
- Employment and wealth creation
- Local Material Supplies
- Health benefits of the project
- Benefits to education
- Improved standard of living
- Security
- Communications
- Gender Considerations

Negative Environmental and Social Impacts

- Impact on Natural flora and fauna
- Impacts on air quality from vehicle exhaust emissions
- Dust emissions
- Solid waste
- Occupation safety and health hazards
- Social Risks Related to Labour Influx
- Increased Demand for Material Consumption

Proposed Mitigation Measures

Mitigation measures involve avoiding of impact altogether, minimizing the impact, rectifying the impact and gradual elimination of impact over time. Mitigation measures are three: physical, socio-cultural and socio-economic. Physical measures relate to issues of project siting, re-vegetation and preventive measures like bush clearing, erosion, sedimentation and pollution control and good construction / farming practices, waste management, and application of Environmental Guidelines for Contractors. Socio-economic measures will include education and awareness, hygiene and sanitation training, rules and regulations, institutional support (including

skills training), and recruitment of qualified personnel while socio-cultural measures could include allowing limited and monitored access to restricted areas for cultural reasons where applicable.

Environmental Screening Process

The Environmental and Social Screening Process outlined in the ESMF complements Kenya's EIA procedures for meeting the environmental and social management requirements. The Environmental and Social Screening Process also meets the requirements of the World Bank Safeguards Policies. It provides a mechanism for ensuring that potential adverse environmental and social impacts of projects by KPLC are identified, assessed, mitigated and monitored as appropriate, through an environmental and social screening process. This will be undertaken by qualified NEMA registered EIA/EA experts within KPLC staff supported by regional staff

The Environmental Management Coordination Act, 1999, (as amended) 2015, and the Environmental (Impact Assessment and Audit) Regulations (June 2003) prescribe the conduct for Environmental Impact Assessment for development projects.

Public consultations and participation

Stakeholder engagement and consultation with regard to the AFD/EU/EIB LMCP will be conducted on a preliminary basis by KPLC in the counties set to benefit from implementation of the project after screening but before construction. These consultations will take place during preliminary sub-project site identification and mapping as part of a wider assessment where the views and thoughts of the involved stakeholders (including National Government and County governments, civil society, and local stakeholders) will be sought.

During the AFD/EU/EIB LMCP ESMF preparation extensive consultations have been conducted. Although consultation between KPLC and AFD/EU/EIB are ongoing the stakeholder consultation are scheduled to be done by KPLC after E&S screening. Such consultations will continue to be ensured further by the contractor during design and implementation stage of the project and it will be harnessed during environmental screening, assessment, and while formulating the ESMPs by the contractor. A comprehensive framework for the participatory consultation including an effective feedback mechanism and information disclosure will be developed by KPLC and incorporated for implementation during the entire duration of the AFD/EU/EIB Last Mile Connectivity Project.

Capacity building for KPLC staff

KPLC has a well-staffed Safety, Health and Environment (SHE) department. The SHE staff will form part of the Project Implementation Unit (PIU). KPLC PIU staff with help from regional staff will be continuously involved in the implementation of the environmental screening process. The AFD/EU/EIB LMCP will assist in strengthening KPLC PIU staff through support for capacity building in environmental and social management as regards the rehabilitation and construction of distribution network lines for last mile connectivity through training by the consultant. Selected KPLC staff will undergo training in environmental management

systems and impact assessment, implementation of the environmental and social screening process outlined in this ESMF, Strategic Environmental and Social Assessment, Hazardous waste management and pollution control and Occupational Health & Safety.

ESMF Implementation Budget

The Project implementation budget refers to all costs that will be incurred to implement the works including requirements or recommendations of the ESMF. The ESMF requirements ensure that Project implementation integrates environmental and social issues for the sustainability of the project as well as the sub-projects. Among other things the ESMF recommends the following key issues, namely; site specific screening, development and implementation of lot specific construction ESMPs, site specific ESMPs for sensitive sites. The contractors will determine the cost of implementing the ESMPs for the various lots and factor that cost during their bidding.

Compliance to the ESMF

The list of measures to mitigate potential adverse impacts as per screening results, including terms and conditions and the lot specific ESMP, supplemented by any additional site specific measures will be attached as a part of the ESHS-MP. A clause in the Particular Conditions of Contract will refer to the Environmental and Social Management Plan for a proposed project. The Particular Conditions of Contract prepared by KPLC based on the ESMF will also stipulate that any non-compliance with the mitigation measures set out in the contract will attract the same remedies under the contract as any non-compliance with the contract provisions; such remedies would be instructions, notices, suspension of works, etc. The Instruction to Bidders will highlight the inclusion of the ESMF in the contract specifications and the contractor's obligation of compliance. The performance agreement will carry a clause to the effect that the recipient shall ensure the design; construction; operation and implementation of the proposed projects are carried out in accordance with the ESMF.

1 CHAPTER ONE: INTRODUCTION

1.1 Background

Stimulation of economic growth and improved job creation for economic wellbeing of Kenyans is one of the top agendas of the current government. Among the many interventions to implement this is to boost power supply to customers by enhancing service connection and installation of new transformers. Enhanced service connection will involve erection of poles and stringing of low voltage lines, installation of single core concentric cable and installation of electronic pre-paid energy meters. This aims at connecting more customers to the grid. Currently some transformers are under-utilized hence need for maximization under this project.

To reduce the burden of financial loss to Kenya Power resulting from underutilized transformers and low connectivity due to distance from existing transformers to customers, the strategy proposed is power network infrastructure expansion through external funding. This will be achieved by installation of new transformers and optimizing the existing network by installation of additional low voltage. The entire scope (AFD/EU and EIB scopes combined) is estimated to cover: service connection of 280,475 households through the erection of poles, stringing of 940 kms of 75mm^2 ACSR conductor, installation of 940 distribution transformers, stringing of 14,025 kms of Low Voltage line in 50mm^2 aluminum conductor (PVC covered for phase conductors and bare for neutral conductors), installing a total of 5,610 kms of 10mm^2 aluminum single core concentric cable, installation of 280,475 electronic pre-paid energy meters and all other associated materials and accessories on turnkey basis.

According to the annual report for the year ended 30th June 2017, Kenya Power had a total installed capacity of approximately 2,333 Megawatts serving about 6,182,282 million customers within the national grid and off grid stations. The company's power line infrastructure as at June 2017 was;1527 km of 220kV, 3,239km of 132 kV, 1,212km of 66kV, 30,846km of 33kV and 37,234km of 11kV. New access levels for electricity imply increased demand for electricity which require major expansion in power generation, transmission and distribution infrastructure within the country.

While other maximization projects such as Last Mile Connectivity Project funded by African Development Bank and the World Bank have increased customer connectivity within a radius of 600m from existing underutilized transformers, the existing power supply however needs to be accessible to ensure provision of quality service to all customers. This can be achieved by boosting the distribution and supply infrastructure to ensure availability power supply. As such, European Union, European Investment Bank and Agence Francaise de Developpement plans to finance Last Mile Connectivity Project to enhance connectivity and increase the number of customers connected to the National Grid at an affordable cost. This ensures electricity access in line with the Kenya growth and development strategy.

1.2 Purpose of ESMF

ESMF is to provide a procedure for environmental and social assessment of the proposed AFD/EU/EIB Last Mile Connectivity Project. ESMF was selected because even though the footprint of the project is known, design and other details about the investment are not available prior to appraisal of the project. ESMF

will guide KPLC in determining the appropriate level of environmental and social assessment required for the proposed AFD/EU/EIB LMCP and in preparing the necessary environmental and social mitigation measures for the project during the preconstruction, construction and operational phases

1.3 Objectives of the ESMF

The main objective of this ESMF is to ensure that the implementation of the AFD/EU/EIB Last Mile Connectivity Project will be carried out in an environmentally and socially sustainable manner to ensure that company activities in proposed project implementation sites do not adversely affect the environment. ESMF will provide the project implementers with an environmental and social screening process and environmental management procedure that will enable them to identify, assess and mitigate potential environmental and social impacts of specific project activities, including filling of Screening forms and development of site Specific Construction ESMPs by the Contractor.

The Environmental and Social Management Framework (ESMF) seeks to institute a consistent and effective environmental and social screening process for application to all components of the AFD/EU/EIB Last Mile Connectivity Project.

Specific objectives of the Environmental and Social Management Framework include:

To ensure that all projects are screened for potential adverse environmental and social impacts and that appropriate mitigation and monitoring measures, are identified and implemented including assigning of responsibilities as outlined in the ESMP to support and empower Kenya Power and Lighting Company officers to carry out Environmental, Social and Safety monitoring of the ESMPs by checking the Compliance of the Contractor on a monthly basis.

1.4 Institutional and Implementation Arrangements

The KPLC will provide overall coordination of the Project and lead in the implementation of Component on service connection and new distribution transformer installation, which will include overall responsibility for safeguards due diligence, and compliance monitoring. KPLC will ensure that competent staff is responsible for coordinating and supporting the development of safeguards, and will prepare guidelines that will include checklist for subprojects, their potential threats, and mitigation measures as well as capacity building for safeguards implementation and compliance monitoring. The Contractors will fill Screening forms and depending on the result of this screening, develop Site specific ESMPs and advise whether there is need for detailed studies. Thus, electrical construction companies who bid for any of the subprojects under this component will have to indicate in their respective bids how they intend to address environmental and social sustainability issues that could be associated with the provisions of those services. The selected companies will be responsible for implementing the safeguards on the ground, including ensuring compliance with occupational health and safety imperatives. The generation of safeguard reports during implementation of project activities will start from the contractors and through the KPLC and to MoE.

KPLC will be responsible for metering after the installation of the network by the Contractor. The contractor will be responsible for construction of the distribution system and installation of new distribution transformers. KPLC will prepare appropriate safeguards instruments that will be consulted upon, reviewed and cleared by the Bank and locally disclosed. Under Component 1(Service Connection), KPLC have overall responsibility for safeguards due diligence and the private sector contractors hired for and installation will be responsible for preparing a Construction ESMP (based on the KPLC's general ESMP) for subprojects, their potential threats, and mitigation measures as well as for safeguards implementation and compliance monitoring.

1.5 Environmental and Social Screening

The Contractor will complete the Environmental and Social Screening Checklist for the project sites and based on the screening results, develop Site Specific Construction ESMPs and determine whether there is need for further studies. In case ESIA will be required for any special case sites, KPLC will undertake the ESIA study and seek clearance from NEMA for implementation by the contractor. The screening process has been proposed because the exact locations of the sub-projects have not been definitively identified, and therefore potential adverse localized environmental and social impacts cannot be precisely identified.

1.6 Level of Environmental Work

Level of environmental work for the AFD/EU/EIB Last Mile Connectivity Project will include application of environmental and social mitigation measures based on findings from the environmental and social screening. Alternatively; level of civil and electrical works for the project may not require application of environmental mitigation measures but application of routine safety and health measures.

1.7 Coordination of Environmental and Social Screening at KPLC

During implementation of the AFD/EU/EIB Last Mile Connectivity Project, Kenya Power staff from Safety, Health and Environment department shall coordinate in corporation with various County Environmental Officers in the evaluation of environmental impacts and determination of appropriate mitigation measures.

1.8 Potential Users of the ESMF

This framework has been prepared as a reference document for use by key stakeholders who will be involved in the planning, implementation, management and operation of the proposed AFD/EU/EIB Last Mile Connectivity Project for KPLC. As a reference material, the framework is useful to the following proposed project key stakeholders:

- AFD/EU/EIB Various government ministries; and
- Non-Governmental Organizations involved in natural resource management.

- KPLC as the implementing agencies;
- Ministry of Energy
- National government and County officials responsible for environmental planning and management including NEMA;
- Politicians and local traditional leaders;
- Sector Environmental Management Coordinators
- County Environmental Management Officers and Committees;
- Potential consumers of electricity;
- The private sector;
- Planners and engineers for the preparation of plans and designs of the subproject activities; and

Engineers, contractors and companies to be involved in implementation of the -project activities. The Engineers/Consultant will use the ESMF to ensure compliance by the Contractors. The Works Contractors will use the ESMPs to precisely understand what are their responsibilities to implement the measures on the sites during construction.

2 CHAPTER TWO: AFD/EU/EIB LAST MILE CONNECTIVITY PROJECT DESCRIPTION

2.1 Introduction

The Government of the Republic of Kenya is seeking financial support from the European Investment Bank, European Union and Agence Francaise de Developpement for the Last Mile Connectivity Project (AFD/EU/EIB LMCP). The proposed implementation period is 2 years. The project aims to connect more customers to the national grid and improve electricity access in line with the Kenya Growth and Development Strategy.

The purpose of ESMF is to define the scope of work and tasks for the preparation of an Environmental and Social Management safeguards document for the implementation of the AFD/EU/EIB Last Mile Connectivity Project.

2.2 Background

The energy sector plays a critical role in the socio-economic development of a country. Kenya is committed to universal access to modern forms of energy by year 2030, as articulated in the national economic development blueprint, the Vision 2030 (the Vision). The goal of the Vision is to make Kenya a middle-income country enjoying a high quality of life by the year 2030. The objectives of the Vision have been adopted as GoK's national development objectives. Under this Vision, Kenya expects to achieve an economic growth rate of 10 % and above.

Energy is identified as a critical enabler of this vision. Currently, only 70% of the households (7 million), have electricity access from the national grid or mini-grids. The electrification rate is planned to be increased to 100 % by 2022. To attain these goals, policy and regulatory frameworks have been articulated for the energy sector through energy policy (Sessional Paper No.4 of 2004) and the Energy Act of 2019.

Currently, the energy policy and the Act have been reviewed to align them with the Vision, the new Constitution of Kenya (2010) and global trends.

Kenya Power supports the efforts of the Government of Kenya in the Electrification Projects under the Last Mile Connectivity initiative. Kenya Power have contributed significantly to the national electrification programme through other phases of Last Mile Connectivity Projects funded by AfDB and World Bank with minimal environmental impacts. The AFD/EU/EIB LMCP shall be subjected to environmental screening so as to determine potential environmental and social impacts and propose appropriate mitigation measures in line with the donors' safeguard policies as well as relevant national environmental legislation.

2.3 AFD/EU/EIB Last Mile Connectivity Project (AFD/EU/EIB LMCP)

The proposed AFD/EU/EIB LMCP will be coordinated by The Ministry of Energy & Petroleum. The main implementer of the project is KPLC. However, at this stage, the specific project sites/locations have not been fully identified. The project broader scope will cover mainly construction of low voltage 33 kV and 11kV distribution lines, installation of new distribution transformers, installation of electronic pre-paid energy meters and erection of poles.

a) Targeting

Driven by the imperative to provide equal opportunities across the entire Kenyan territory as key to achieving Kenya's Vision 2030 and the national target of achieving universal access to electricity by 2022, the GoK now seeks to close the access gap by providing electricity services which is reliable and flexible to ensure access in poorly served areas of the country. The proposed AFD/EU/EIB LMCP directly promotes these objectives by supporting the strengthening and stabilizing of the distribution network through introduction of more distribution lines and transformers to drive electrification of households.

b) Geographic and work Scope

The proposed project which will entail distribution power lines and distribution transformers with a component for household electrification. The project will geographical cover various Counties selected by the financer nationally including Nandi, Uasin Gishu, Trans Nzoia, Bungoma, West Pokot, Kisumu, Siaya, Vihiga, Busia, Kakamega, Homabay, Kisii, Migori, Nyamira, Bomet, Kericho, Nyandarua, Nakuru, Narok, Laikipia, Nyeri, Embu, Kirinyaga, Murangá, Meru, Tharaka Nithi, Kajiado, Makueni, Kitui, Kilifi, Kwale and Taita Taveta. The table below gives an overview of the project scope and locations.

Table 2: AFD/EU/EIB LMCP geographic and work scope

AFD/EU SCOPE OF WORKS

Lot 1; Connection to the grid of **14,049** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 1	Nandi, Uasin Gishu, Trans Nzoia	• Design, Supply, Installation & Commissioning of 33/.433Kv, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 27 no. • Design, Supply, Installation and Commissioning of 15kms, 14kms and 543kms of 33kV, 11kV and Low Voltages respectively

Lot 2; Connection to the grid of approximately **4,683** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 2	West Pokot	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 187 no. • Design, Supply, Installation and Commissioning of 103kms, 84kms and 561kms of 33kV, 11kV and Low Voltages respectively

Lot 3; Connection to the grid of approximately **10,314** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 3	Bungoma	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 37 no. • Design, Supply, Installation & Commissioning of 21kms, 16kms and 636kms of 33kV, 11kV and Low Voltages respectively

Lot 4; Connection to the grid of approximately **29,938** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 4	Kisumu, Siaya Busia	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 45 no.

	Vihiga	• Design, Supply, Installation & Commissioning of 25kms, 20kms and 675kms of 33kV, 11kV and Low Voltages respectively

Lot 5; Connection to the grid of approximately **9,645** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 5	Kakamega	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 59 no. • Design, Supply, Installation & Commissioning of 33kms, 26kms and 906kms of 33kV, 11kV and Low Voltages respectively

Lot 6; Connection to the grid of approximately **4,683** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 6	Homabay	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 43 no. • Design, Supply, Installation & Commissioning of 24kms, 19kms and 609kms of 33kV, 11kV and Low Voltages respectively

Lot 7; Connection to the grid of approximately **5,854** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01Lot 7	Kisii	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 26 no.

		• Design, Supply, Installation & Commissioning of 14kms, 12kms and 450kms of 33kV, 11kV and Low Voltages respectively

Lot 8; Connection to the grid of approximately **7,192** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 8	Migori	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 61 no. • Design, Supply, Installation & Commissioning of 34kms, 27kms and 489kms of 33kV, 11kV and Low Voltages respectively

Lot 9; Connection to the grid of approximately **18,963** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 9	Nyamira, Bomet, Kericho	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 38 no. • Design, Supply, Installation & Commissioning of 20kms, 18kms and 402kms of 33kV, 11kV and Low Voltages respectively

Lot 10; Connection to the grid of approximately **30,553** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 10	Nyandarua, Nakuru, Laikipia, Nyeri	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 38 no. • Design, Supply, Installation & Commissioning of 20kms, 18kms and 459kms of 33kV, 11kV and Low Voltages respectively

Lot 11; Connection to the grid of approximately **7,582** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 11	Narok	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 133 no. • Design, Supply, Installation & Commissioning of 73kms, 60kms and 423kms of 33kV, 11kV and Low Voltages respectively

Lot 12; Connection to the grid of approximately **16,236** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 12	Embu, Kirinyaga, Muranga, Tharaka Nithi	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling **41** no.

		• Design, Supply, Installation & Commissioning of **23**kms, 18kms and 531kms of 33kV, 11kV and Low Voltages respectively

Lot 13; Connection to the grid of approximately **4,516** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 13	Meru	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling **53** no. • Design, Supply, Installation & Commissioning of **29**kms, **24**kms and **657**kms of 33kV, 11kV and Low Voltages respectively

Lot 14; Connection to the grid of approximately **8,140** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 14	Makueni	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling **32 no**. • Design, Supply, Installation & Commissioning of **18**kms, **14**kms and **342**kms of 33kV, 11kV and Low Voltages respectively

Lot 15; Connection to the grid of approximately **7,694** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works

KP1/6E.3/OT/8/22/B01Lot 15	Kitui	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 87 no. • Design, Supply, Installation & Commissioning of 48kms, 39kms and 591kms of 33kV, 11kV and Low Voltages respectively

Lot 16; Connection to the grid of approximately **14,217** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/8/22/B01 Lot 16	Kajiado, Kwale, Taita Taveta	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 13 no. • Design, Supply, Installation & Commissioning of 9kms, 8kms and 375kms of 33kV, 11kV and Low Voltages respectively

Lot 17; Connection to the grid of approximately **3,234** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
		•
KP1/6E.3/OT/8/22/B01 Lot 17	Kilifi	• Design, Supply, Installation & Commissioning of 33/.433kV, 11/.433kV, 33/.25kV and 11/.25kV distribution transformers totaling 16 no.

		• Design, Supply, Installation & Commissioning of 8kms, 8kms and 417kms of 33kV, 11kV and Low Voltages respectively

EIB SCOPE OF WORKS

Lot 1; Connection to the grid of approximately **10,444** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 1	Nakuru, Kericho	• Design, Supply, Installation & Commissioning of 522km of low voltage lines.

Lot 2; Connection to the grid of approximately **14,582** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 2	Nandi, Uasin Gishu, Trans Nzoia, Bungoma, West Pokot	• Design, Supply, Installation & Commissioning of 726km of low voltage lines.

Lot 3; Connection to the grid of approximately **10,413** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 3	Kisumu Siaya	• Design, Supply, Installation & Commissioning of 519km of low voltage lines.

Lot 4; Connection to the grid of approximately **8901** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 4	Migori, Homabay, Kisii	• Design, Supply, Installation & Commissioning of 444km of low voltage lines.

Lot 5; Connection to the grid of approximately **9,461** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 5	Vihiga,Busia, Kakamega	• Design, Supply, Installation & Commissioning of 474km of low voltage lines.

Lot 6; Connection to the grid of approximately **9,713**Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 6	Narok, Bomet, Nyamira	• Design, Supply, Installation & Commissioning of 465km of low voltage lines.

Lot 7; Connection to the grid of approximately **12,853** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 7	Nyandarua, Laikipia, Nyeri, Meru, Tharaka Nithi	• Design, Supply, Installation & Commissioning of 642km of low voltage lines.

Lot 8; Connection to the grid of approximately **9,937** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 8	Kitui, Embu, Kirinyaga, Muranga	• Design, Supply, Installation & Commissioning of 498km of low voltage lines.

Lot 9; Connection to the grid of approximately **12,849** Customers in the following selected peri-urban and rural areas within the indicated counties, as shown on table below;

Lot Name	Counties	Scope of Works
KP1/6E.3/OT/9/22/B02 Lot 9	Kajiado, Makueni, Kilifi, Kwale	• Design, Supply, Installation & Commissioning of 615km of low voltage lines.

c) AFD/EU/EIB LMCP Components

As outlined in the tables above the proposed AFD/EU/EIB LMCP which comprise of two major components include the following;

2.3.c.1 Component 1- Service Connection

Proposed connection of 280,475 households through the erection of poles, stringing of 940 kms of 75mm2 ACSR conductor, stringing of 14,025 kms of Low Voltage single phase line in 50mm2 aliminium core, installing a total of 5,610 Kms of 10mm2 aluminium single core concentric cable and installation of 280,475 electronic pre-paid energy meters.

The service connection is aimed at having more households connected to the national grid and benefiting from supply of quality power by having them supplied electricity using shorter distribution lines.

Proposed 33kV and 11 kV lines are aimed at improving the quality of supplies and voltage levels at various Towns and Environs.
The exact routes and sites are not yet definitively identified. Once they are established Environmental and Social Screening and Environmental Management Plans (EMPs) will be prepared as required by NEMA and European Investment Bank guidelines.

2.3.c.2 Component 2 – Installation of Distribution Transformers

Proposed installation of 940 distribution transformers in various Counties are aimed at reinforcing the system by establishing at the load Centre to increase reliability and reduce line losses. The project will also ensure that transformers are installed as near as possible to households to maximize the quality of power supplied to customers.

d) Project Implementation, Supervision and management for AFD/EU/EIB LMCP

KPLC will be the Implementing Agency for the AFD/EU/EIB Last Mile Connectivity Project through the Project Implementation Unit (PIU). KPLC has the necessary technical and managerial ability to implement projects as demonstrated by the on-going projects financed by development partners. A consultant to be recruited through competitive bidding process will reinforce the capacity of the Project Implementation Unit. The Consultant will be responsible for overall supervision of the project and enforcement of the ESMF.

e) Monitoring and Evaluation of Project Implementation

KPLC will maintain comprehensive and robust consultation, monitoring and evaluation systems. The PIU will ensure that the members in the Implementation Units are fully integrated into the management information processes of the project. The Monitoring and Evaluation System will track the performance indicators, scheduling and implementation data, and expenditure in the course of the project.

f) Assignment of Responsibilities

Entity	Responsibilities
KPLC -PIU	➢ Handle consultation process and finalize the site selections before the start of the works ➢ Approve designs and screening documents per site (i.e. transformer) ➢ Approve lot specific ESMP's of the twenty six (26) lots. ➢ Level 2 control of adherence to ESMF by the contractors. ➢ Resolving wayleaves issues on the ground during project implementation phases. ➢ Compensation for any involuntary resettlements.

Entity	Responsibilities
	➢ Ensuring disputes are resolved as per the grievance redress mechanism in this ESMF. ➢ Based on site specific screening documents and lot specific ESMPs, develop site specific ESIAs and site specific ESMPs and site specific RAPs where necessary in order to obtain NEMA approval ➢ Grievance Redress Level 3 ➢ MV wayleave consent acquisition ➢ Approval of LV wayleave consents
Supervising Consultant	➢ Overall Supervision of the project. ➢ Review site specific screening document and lot specific ESMPs ➢ Monitoring & Enforcement of compliance to ESMF level 1, mitigation measures on sensitive ecosystems and general mitigation measures described in chapter 6, and lot specific ESMP's by the Contractors during project implementation. ➢ Report and follow up on any non-conformity or issue (complains) ➢ Provision of reports on the progress of the implementation of the project and the correct implementation of lot specific ESMP's as far as this ESMF is concerned. ➢ Grievance Redress Level 2 ➢ Verification of LV wayleaves consents obtained by Contractors
Contractor	➢ Develop site specific screening document ➢ Developlot specific ESMPs. ➢ Implement lot specific ESMP's and comply with ESMF provisions. ➢ Report on E&S issue to the consultant ➢ Grievance Redress Level 1 ➢ Obtaining LV wayleave consents

3 CHAPTER THREE: METHODOLOGY

Several methods were involved in the preparation of this ESMF to meet the European Investment Bank safeguard policies, the World Bank Safeguard Policies and Kenyan legal requirements.

3.1 Detailed & In-depth Literature Review

This was done through a thorough review of the project concept paper, project development objectives and key indicators, project components, project target areas, institutional and implementation arrangements, and monitoring and evaluation of outcomes. Some key baseline information on Kenya's recent macro-economic developments especially in the energy sector development was reviewed from project documents. The review also covered Kenya's policy, legal, regulatory and administrative frameworks relevant to the proposed AFD/EU/EIB Last Mile Connectivity Project. The European Investment Bank Operational Safeguard Policies and the World Bank Safeguard Policies were reviewed to identify the likely policies to be triggered by subprojects.

Among the documents that were reviewed in order to familiarize and further understand the project included:

(i) European Investment Bank Related Documents

- *European Investment Bank Environmental and Social Standards*
- World Bank Environmental and Social Safeguard standards

(ii) Kenyan Documents

- *Kenyan Constitution 2010*
- *Environmental Management and Coordination (Amendment) Act (2015)*
- *Water Act (2016)*
- *Energy Act 2006*
- *Traffic Act (Cap. 403) of 2015*
- *Land Acquisition Act. Chapter 295. Revised Edition 2010*
- *Community land Act 2016*
- *Public Health Act. Chap 242. Revised Edition 2012*

- *Wildlife Act 2006*
- *Forest Act 2005*

The detailed in-depth literature review was informed by the fact that the designs and precise sites for the project implementation are not yet identified at this stage

3.2 The Environmental and Social Screening Process for the AFD/EU/EIB Last Mile Connectivity Project

a) Introduction

The Environmental Management Coordination Act of 1999 and the Environmental (Impact Assessment and Audit) Regulations (June 2003) prescribe the conduct for Environmental Impact Assessment for development projects. Social and environmental sustainability are fundamental to the achievement of development outcomes and must be systematically mainstreamed into all development projects. While the screening process takes place during the Project design stage as part of a good planning process, implementation and monitoring of identified risk management and mitigation measures is required throughout the life-cycle of the Project.

b) Environmental and Social Screening in the Framework

The Environmental and Social Screening Process outlined in the ESMF complements Kenya's EIA procedures for meeting the environmental and social management requirements. The Environmental and Social Screening Process also meets the requirements of the European Investment Bank Standards. It provides a mechanism for ensuring that potential adverse environmental and social impacts of Projects implemented by KPLC are identified, assessed and mitigated and monitored as appropriate, through an environmental and social screening process (see ***Environmental and social screening form annex1.)***

c) Objectives of the Screening processes

The objectives of the screening process are to:

a) Determine the potential adverse environmental and social impacts of the proposed project by looking for best options to avoid E&S negative impacts
b) Determine the appropriate environmental category of environmental assessment;
c) Determine appropriate mitigation measures for addressing adverse impacts identified during design using the Sample Environmental and Social Checklist (Annex 2); this checklist can be adjusted to reflect project-specific environmental management requirements;
d) Based on the assigned environmental category, determine the appropriate level of environmental work required (i.e. whether an ESIA is required or not (environmental category A (High Risks) or B+ (Important Risks)); whether the application of simple mitigation measures will suffice (environmental category B); or whether the project has negligible adverse environmental and social risks (Environmental category C). In case the environmental category of a sub-project is determined to be A or B+ and no alternative route is viable, KPLC will carry out full ESIA, seek approvals from NEMA and

handover to the contractor for implementation.

e) Determine the extent of potential solid and liquid waste generation, including hazardous wastes such as PCB, storage batteries and creosote, and appropriate mitigation measures;
f) Determine potential adverse impacts on physical cultural resources, and provide guidance to be applied in the case of chance finds;
g) incorporate environmental mitigation measures as presented in the screening form and/or separate EA report into the proposed project design;
h) Determine potential adverse social impacts due to land acquisition;
i) Facilitate the review and approval of the screening results and separate ESMP reports (the screening form would be looking at planned construction and rehabilitation activities);
j) Ensure that site-specific E&S measures are implemented to take into account site-specific E&S risks identified during detailed designs
k) Provide environmental and social monitoring indicators to be followed during the construction, rehabilitation, operation and maintenance of the infrastructure service facilities and related project activities.

d) The Screening Process

The extent of environmental work that might be required, prior to the commencement of AFD/EU/EIB LMCP will depend on the outcome of the screening process described below.

Step 1: Site Identification

KPLC will carry out specific site identification in all the 32 counties covered by the project and hand them over to the contractor during contract signature as part of the contract.

Step 2: Screening of project sites

After sites handover by KPLC, the Contractor will initiate the site screening process by completing the Environmental and Social Screening Form (**annex 1)**

The results and recommendations presented in the Environmental and Social screening forms and the proposed mitigation measures presented in the Environmental and Social checklists will be reviewed by the Consultant and approved by KPLC.

The screening form, when correctly completed, will facilitate the identification of potential environmental, social, health and safety impacts and suggested mitigation measures as outlined in chapter 6.

Step 3: Assigning the Appropriate Environmental Category

The environmental and social screening form, when completed, will provide information on the assignment of the appropriate environmental category to a particular subproject. The KPLC PIU will be responsible for assigning the appropriate environmental category to the proposed AFD/EU/EIB LMCP in accordance with the requirements of EMCA 1999.

As per World Bank Environmental and Social Safeguard standards, projects can be categorized as follows;

A. **Category A:** A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. EA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" situation), and recommends any measures needed to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental performance. For a Category A project, the borrower is responsible for preparing a report, normally an ESIA (or a suitably comprehensive or sectorial EA) that includes as necessary, elements such as environmental audits or hazard or risk assessments. For AFD/EU/EIB Last Mile project, any 33 or 11kV lines crossing a “National park” or another “protected area” will be rated as “A”, unless no biodiversity destruction is required.

B. **Category B:** A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas - including wetlands, forests, grasslands, and other natural habitats - are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects. The scope of EA for a Category B project may vary from project to project, but it is narrower than that of Category A. Like Category A, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

C. **Category C:** A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

This project has been categorized as B as per AFD ranking. In the unlikely event a specific sub-project, after screening is found to fall under category “A” as per the above definition, the Contractor, together with KPLC, will look for design changes (line route, etc.) to try to avoid E&S negative impacts, that would allow to review the E&S category as a “B” project. In the event that after the review of E&S category the project is still in category A or B+ it will be addressed as outlined in clause 3.4.

3.3 Worksite Environmental and Social Management Plan (Worksite ESMP)

a) The Contractor prepares and ensures prior validation by the Engineer, implementation and regular update of a Worskite Area Environmental and Social Management Plan (Worksite - ESMP).
b) The Worksite - ESMP represents the unique reference document in which the Contractor defines in detail all organisational and technical provisions implemented to satisfy the obligations of the ESHS Specifications.
c) The Contractor defines in the Worksite - ESMP the number, the locations and the type of Project Area as defined in Sub-Clause 1.3 of the ESHS Specifications. For each of the identified Project Area, unless otherwise agreed by the Engineer, the Contractor establishes an Environmental Protection Plan (EPP). The EPP(s) are annexed to the Worksite - ESMP.
d) The Worksite - ESMP covers the entire period from the Contract Agreement signature date to the date of issue of the Performance Certificate by the Engineer.
e) Unless agreed otherwise by the Engineer, the Worksite - ESMP is written in the language of communication defined under Sub-Clause 1.4 of the CC.
f) The first draft version of the Worksite - ESMP is to be provided by the Contractor to the Engineer within 28 days from the date of execution of the Contract Agreement.
g) No physical work or activity shall commence on any Project Area until such time the Worksite - ESMP, and the annexed EPP corresponding to the Project Area, are approved by the Engineer.
h) During the execution of the Works, whenever instructed by the Engineer, the Worksite - ESMP will be updated by the Contractor and reissued to the Engineer. The revised version shall highlight the new elements incorporated in the document.
i) The Worksite - ESMP (and the EPP) is structured according to the plan specified in Appendix 1 to the ESHS Specifications.

3.4 Handling Sensitive site

Sensitive sites refer to sensitive eco-systems as outlined in section 5.5 and sites with sensitive social considerations.

After the screening process, the sites which will not require ESIA will be reviewed by the consultant and cleared by KPLC for implementation using the lot specific ESMPs developed by the contractor. KPLC will conduct ESIA for specific sites (if any) with sensitive site conditions and develop site specific ESMPs and handed over to the contractor for implementation.

3.5 Environmental Monitoring

This describes the processes and activities that need to take place to characterize and monitor the quality of the environment in the project sites. This will be used towards the preparation of environmental screening, as well as in many circumstances in which the project activities carry a risk of harmful effects on the natural environment. All monitoring strategies and programs for the projects shall have reasons and justifications which will be designed to establish the current status of an

environment or to establish trends in environmental parameters where the projects shall be implemented. In all cases the results of monitoring will be reviewed, analyzed statistically and published for the purpose of project implementation. The project design should have a monitoring program which must have regard to the final use of the data before project monitoring starts. This environmental monitoring for the projects should be continuous throughout the project life.

Some monitoring indicators will be defined at the beginning of the project by KPLC together with the Consultant and Contractor. These are the measurement, statistic or value that provides approximate gauge or evidence of the effects of environmental management programs or the state or condition of the environment that could result from the projects implemented by KPLC. The environmental indicators that need to be monitored include air quality, water quality, flora and fauna, human health, social and economic conditions.

3.6 PUBLIC CONSULTATION & PARTICIPATION DURING SCREENING

a) Introduction

Stakeholder engagement and consultation with regard to the AFD/EU/EIB LMCP will be conducted on a preliminary basis by KPLC in the different regions of Kenya to be covered by the project. These consultations will take place during preliminary sub-project site identification and mapping as part of a wider assessment where the views and thoughts of the involved stakeholders (including National Government and County governments, civil society, and local stakeholders) will be sought.

Further public consultations and stakeholder engagements will be conducted by contractor during environmental screening processes and construction. Post construction stakeholder engagement will be carried out by KPLC.

The objectives of consultation are to disclose information on AFD/EU/EIB LMCP and disclose the draft safeguard document to relevant stakeholders, particularly the communities affected and to provide opportunity to the stakeholders to voice their opinions and concerns on different aspects of the project. The opinions and suggestions of the stakeholders will assist in taking appropriate decisions for effective environmental management of the components, help facilitate and streamline decision making whilst fostering an atmosphere of understanding among individuals, groups and organizations, who could affect or be affected by the sub-projects.

The specific objectives of Public Consultations are:

a) To keep stakeholders informed about the project components at different stages of implementation,
b) To address the Environmental and Social concerns/ impacts, and develop mitigation measures taking into account the opinion/ suggestions of the stakeholders,
c) To generate and document broad community support for the sub-projects,
d) To improve communications among interested parties and,
e) To establish formal complaint submittal/ resolution mechanisms.

b) Consultation Process

During the AFD/EU/EIB LMCP implementation, extensive consultation will be conducted. It will be harnessed during environmental screening, assessment, and while formulating the ESMPs. A comprehensive framework for the participatory consultation including an effective feedback mechanism and information disclosure will be developed and incorporated for implementation during the entire duration of the AFD/EU/EIB Last Mile Connectivity Project.

A critical element in AFD/EU/EIB LMCP will be planning a participatory consultation program that will be associated with the selection of participation techniques to meet desired objectives. Considering the importance of effective participation and consultation in a widespread project area along with the time and resource constraints in the AFD/EU/EIB LMCP, the following participation techniques will be followed:

- Information dissemination and information sharing techniques will be used to inform the stakeholders regarding the actions being taken at the AFD/EU/EIB LMCP sites through personal communication to make them aware about the project as well as to incorporate users input at different stages of the project.
- Focused Group Discussion (FGDs) shall be conducted covering different components of the AFD/EU/EIB LMCP to increase local awareness about the forthcoming project as well as to incorporate their views, needs, priorities considering different positive and negative impact of the project.
- Key Informant Surveys will be carried out among the key experts and knowledgeable people of the project area to incorporate their views and suggestions from their long experiences and knowledge.
- Hot Spot Consultation will be conducted in problematic locations of the AFD/EU/EIB LMCP sites with participation of knowledgeable and affected people, local elite, public representatives, Government Officials, CBOs and NGOs to mitigate adverse impacts considering their views suggestions from their practical experiences as per local needs and demands.

c) Instruments for Use during Consultations

The Kenya Guidelines for ESIA and EA provides details concerning the public consultation methods in Kenya. Such methods include press conferences, information notices, brochures/fliers, interviews, questionnaires and polls, community meetings, advisory committees, and public hearings. The guidelines for public consultation include, among others, a requirement that major elements of the consultation program should be timed to coincide with significant planning and decision-making activities in the project cycle. In terms of Kenya's ESIA process, and donors' policy standards, public consultation should be undertaken during (i) the preparation of the ESIA terms of reference; (ii) the carrying out of an EIA; (iii) government review of an ESIA reports; and (iv) the preparation of Environmental and Social terms and conditions of approval. Consultations will be carried out with communities as part of the Environmental and Social screening process of projects, and the results will be communicated in an understandable language to potentially affected persons and beneficiaries.

Kenya Power is responsible for conducting and providing evidence of meaningful consultation (i.e., consultation that is free, fair and informed) with communities likely to be affected by Environmental and Social impacts, and with local stakeholders, and also for ensuring broad community support, especially for projects affecting indigenous and vulnerable peoples.

Consultation will be undertaken with reference to the updated EMCA (Amendment) 2015 guidance on consultation, participation and broad community support, which also provide guidance on affected communities' involvement in the process of project planning, implementation and monitoring. Consultation will mainly be based on stakeholder analysis and will be preceded by disclosure of adequate project information and Environmental and Social information to ensure that participants are fully informed. The consultation and public participation is a continuous process during project cycle and it will begin at an early stage during project preparation and continues as needed. It will be conducted in a timely manner in the context of key project preparation steps, in an appropriate language, and in an accessible place. The results of the consultation are adequately reflected in the project design and in the project documentation.

For the AFD/EU/EIB Last Mile Connectivity Project, the affected communities and stakeholders will be consulted about the; site specific Environmental Screening Report, site specific Environmental and Social Impact Assessment Report where applicable and the Lot specific ESMP which is going to be developed using ESMF as a guide. Consultation will be conducted mainly with the objective of ensuring that the project has broad community support, and that affected people endorse the proposed mitigation and management measures.

d) Stakeholders Consultation and Participation

The objective of this will be to hold structured and comprehensive consultations with various stakeholders in order to understand their perceived view of the project and assess the extent to which their views need to be taken into account specifically in the project. It is important to note that sensitization has been ongoing on similar projects under the LMCP phase I, II and III covering the same counties and other ongoing public engagement forums conducted by KPLC's SHE department. More public engagements will be carried out by KPLC Environment and Social Unit to sensitize the population on electrical safety, connection options and payment plans. This task will involve the development of structured questionnaires that will guide Focused Group Discussions and Key Informant Interviews as follows.

e) Focused Group Discussions (FGDs)

The National Government, County Governments, NGOs, CBOs, Women Representatives, Youth Representatives among other groups will provide vital qualitative information on the subject that will assist in the implementation of AFD/EU/EIB LMCP. Discussions will be held with various randomly selected groups that will partner with MoE and KPLC on the implementation of this project. The selection of these groups will be done in each County based on their contributions in the intervention areas of the project. The FGDs will be carried out by KPLC in order to ensure that the right information is captured.

The FGDs will be guided by structured questionnaires based on the probing technique of participatory question-based facilitation. This methodological approach will involve inclusive participation with equal treatment of participants and building consensus on various issues in regard to the implementation of AFD/EU/EIB LMCP. The FGDs will be done once the designs of the project have been developed by the contractor and approved by KPLC.

f) In-depth key informant interviews

Key informant interviews will be undertaken to gather qualitative information on AFD/EU/EIB LMCP. The choice of the key informants for the in-depth interviews will be guided by the perceived level of influence, information expected from the persons interviewed and intentional bias to gather information relevant to the project. These interviews will involve use of semi-structured questionnaires developed to cover pertinent issues on AFD/EU/EIB LMCP. The targeted key informants

who will be interviewed include:

- National Government line ministries at the project area
- Relevant County and Sub County Government Officers
- NGOs and CBOs in the project areas

The In-depth key informant interviews will be conducted by KPLC after the designs have been approved.

4 CHAPTER FOUR: DESCRIPTION OF THE ADMINISTRATIVE, POLICY AND REGULATORY FRAMEWORK

4.1 Introduction

There is a growing concern in Kenya and at global level that many forms of development activities cause damage to the environment. Development activities have the potential to damage the natural resources upon which the economies are based. Environmental and Social Management Framework is a useful tool for protection of the environment from the negative effects of developmental activities. It is now accepted that development projects must be economically viable, socially acceptable and environmentally sound.

A detailed review of relevant institutional and legal as well as policy framework that bears significance or implication to the AFD/EU/EIB LMCP is presented in this chapter of the ESMF report. The European Investment Bank and the World Bank Environmental and Social Standards applicable to the project as well as the international laws and conventions that bear relevance to the implementation of this project have also been highlighted in this chapter.

4.2 Environmental Problems in Kenya

There are many environmental problems and challenges in Kenya today. Among the cardinal environmental problems include: loss of biodiversity and habitat, land degradation, land use conflicts, human-animal conflicts, water management and environmental pollution. This has been aggravated by lack of awareness and inadequate information amongst the public on the consequences of their interaction with the environment. MoE and KPLC are aware of the important role the environment plays and as such strives to ensure environmentally sustainable development.

4.3 Administrative / Institutional Framework

In Kenya, The Environmental Management and Co-ordination Act, No.8 of 1999 provides for the establishment of an appropriate legal and institutional framework for the management of the environment and associated matters.
The general principles include:

1. Every person in Kenya is entitled to a clean and healthy environment in accordance with the Constitution and relevant laws and has the duty to safeguard and enhance the environment.
2. The entitlement to a clean and healthy environment under subsection (1) includes the access by any person in Kenya to the various public elements or segments of the environment for recreational, educational, health, spiritual and cultural purposes.
3. Every person shall cooperate with state organs to protect and conserve the environment and to ensure ecological sustainable development and use of natural resources.
4. If a person alleges that the right to a clean and healthy environment has been, is being or is likely to be denied, violated, infringed or threatened, in relation

to him, then such a person can seek redress from court.
The following institutions are established under the act.

a) National Environment Management Authority (NEMA)

The National Environment Management Authority (NEMA), is the principal instrument of Government for the implementation of all policies relating to environment.

The objective and purpose for which NEMA was established was to exercise general supervision and co-ordinate over all matters relating to the environment and to be the principal instrument of the government in the implementation of all policies relating to the environment.

b) National Environment Trust Fund (NETFUND)

The objective of the Trust Fund shall be to facilitate research intended to further the requirements of environmental management, capacity building, environmental awards, environmental publications, scholarships and grants.

c) National Environment Restoration Fund

The Restoration Fund shall be vested in the Authority and shall be as supplementary insurance for the mitigation of environmental degradation where the perpetrator is not identifiable or where exceptional circumstances require the Authority to intervene towards the control or mitigation of environmental degradation.

d) County Environment Committees

The Governor shall, by notice in the Gazette, constitute a County Environment Committee of the County which shall:
(a) be responsible for the proper management of the environment within the county for which it is appointed;
(b) develop a county strategic environmental action plan every five years; and
(c) perform such additional functions as are prescribed by the Act or as may, from time to time, be assigned by the Governor by notice in the Gazette.

e) National Environmental Department

The functions of the National Environmental Department include
(a) to investigate;
(i) any allegations or complaints against any person or against the Authority in relation to the condition of the environment in Kenya;
(ii) on its own motion, any suspected case of environmental degradation, and to make a report of its findings together with its recommendations thereon to the Council;
(b) to prepare and submit to the Council, periodic reports of its activities which report shall form part of the annual report on the state of the environment under section 9(3);
(bb) undertake public interest litigation on behalf of the citizens in environmental matters; and

(c) to perform such other functions and exercise such powers as may be assigned to it by the Council.

f) National Environment Tribunal.

This tribunal guides the handling of cases related to environmental offences in the Republic of Kenya.
(1) The National Environment Tribunal shall consist of the following members;
(a) A chairman nominated by the Judicial Service Commission, who shall be a person qualified for appointment as a judge of the High Court of Kenya;
(b) An advocate of the High Court of Kenya nominated by the Law Society of Kenya;
(c) A lawyer with professional qualifications in environmental law appointed by the Minister; and
(d) Three persons with demonstrated competence in environmental matters, including but not limited to land, energy, mining, water, forestry, wildlife and maritime affairs."
(2) All appointments to the Tribunal shall be by name and by *Gazette* Notice issued by the Cabinet secretary.

4.4 The Legal, Regulatory and Policy Framework

a) The Constitution of Kenya, 2010: Constitutional provisions

Kenya now has a new Supreme law in form of the New Constitution which was promulgated on the 27th of August 2010 and which takes supremacy over all aspects of life and activity in the New Republic. The Constitution is the supreme law of the Republic and binds all persons and all State organs at all levels of government. The Constitution of Kenya, 2010 provides the broad framework regulating all existence and development aspects of interest to the people of Kenya, and along which all national and sectorial legislative documents are drawn.

In relation to the environment, article 42 of chapter four, *The Bill of Rights*, confers to every person the right to a clean and healthy environment, which includes the right to have the environment protected for the benefit of present and future generations through legislative measures, particularly those contemplated in Article 69, and to have obligations relating to the environment fulfilled under Article 70. Chapter 5 of the document provides the main pillars on which the seventy-seven (77) environmental statutes are hinged.

Part 1 of the chapter dwells on land, outlining the principles informing land policy, land classification as well as land use and property. Of core importance is the definition of private land as land within the project area is largely privately owned and would be acquired for irrigation purposes.

The second part of this chapter directs focus on the environment and natural resources. It provides a clear outline of the state's obligation with respect to the environment, thus;

"The state shall-

- *Ensure sustainable exploitation, utilization, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits;*
- *Work to achieve and maintain a tree cover of at least ten per cent of the land area of Kenya;*
- *Protect and enhance intellectual property in, and indigenous knowledge of, biodiversity and the genetic resources of the communities;*
- *Encourage public participation in the management, protection and conservation of the environment;*
- *Protect genetic resources and biological diversity;*
- *Establish systems of environmental impact assessment, environmental audit and monitoring of the environment;*
- *Eliminate processes and activities that are likely to endanger the environment; and*
- *Utilize the environment and natural resources for the benefit of the people of Kenya."*

There are further provisions on enforcement of environmental rights as well as establishment of legislation relating to the environment in accordance to the guidelines provided in this chapter.

In conformity with the Constitution of Kenya, 2010, every activity or project undertaken within the republic must be in tandem with the state's vision for the national environment as well as adherence to the right of every individual to a clean and healthy environment.

Section 69 (2) every person has a duty to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources. Every person has the right to a clean and healthy environment which includes the right –

a) To have the environment protected for the benefit of present and future generations through legislative and other measures, particularly those contemplated in Article 69; and

b) To have obligations relating to the environment fulfilled under Article 70

Section 69 (2) every person has a duty to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources

Section 70 provides for enforcement of environmental rights thus:

If a person alleges that a right to a clean and healthy environment recognized and protected under Article 42 has been, is being or is likely to be, denied, violated,

infringed or threatened, the person may apply to a court for redress in addition to any other legal remedies that are available in respect to the same matter.

(1) On application under clause (1), the court may make any order, or give any directions, it considers appropriate—

a) To prevent, stop or discontinue any act or omission that is harmful to the environment;

b) To compel any public officer to take measures to prevent or discontinue any act or omission that is harmful to the environment; or

c) To provide compensation for any victim of a violation of the right to a clean and healthy environment.

For the purposes of this Article, an applicant does not have to demonstrate that any person has incurred loss or suffered injury.

Essentially, the new Constitution has embraced and provided further anchorage to the spirit and letter of EMCA 1999 whose requirements for environmental protection and management have largely informed Sections 69 through to 71 of this document. In Section 72 however, the new constitution allows for enactment of laws towards enforcement of any new provisions of the Supreme Law.

The Constitution of Kenya, 2010, is robust on social issues also, with Public participation and consultations being enshrined in the national values and principles of governance in Article 10. A number of provisions in the Constitution has set out the principles for public participation and consultation including articles 1 Sovereignty of the people. (2) The people may exercise their sovereign power either directly or through their democratically elected representatives. Article 10 (2) a, b and c; The national values and principles of governance include— (*a*) patriotism, national unity, sharing and devolution of power, the rule of law, democracy and participation of the people; (*b*) human dignity, equity, social justice, inclusiveness, equality, human rights, non-discrimination and protection of the marginalised; (*c*) good governance, integrity, transparency and accountability. Article 27; Equality and freedom from discrimination Article 33; Freedom of expression. (1) Every person has the right to freedom of expression, which includes— (*a*) freedom to seek, receive or impart information or ideas; (*b*) freedom of artistic creativity; and (*c*) academic freedom and freedom of scientific research. Article 35; Access to information article 69 (1) (d) Obligations in respect of the environment. 69. (1) The State shall— (*d*) encourage public participation in the management, protection and conservation of the environment; and article 174(d) Objects of devolution. The objects of the devolution of government are— (*d*) to recognise the right of communities to manage their own affairs and to further their development. These should be highlighted and made use of by the project as part of the free, prior and informed consultations process that has been alluded to in this ESMF.
KPLC will abide to the Constitution in all the phases of this project.

b) Vision 2030

The economic, social and political pillars of Kenya Vision 2030 are anchored on macroeconomic stability; continuity in governance reforms; enhanced equity and wealth creation opportunities for the poor; infrastructure; energy; science, technology and innovation (STI); land reform; human resources development; security as well as public sector reforms. The 2030 Vision aspires for a country firmly interconnected through a network of roads, Electricity railways, ports, airports, water and sanitation facilities, and telecommunications.

Implementing this project will be in line with vision 2030.

c) The Environmental Management and Co-ordination Act, No.8 of 1999 (2015)

This Act provides for the establishment of an appropriate legal and institutional framework for the management of the environment and associated matters.

This Act consists of the following parts which include the Preliminary; General Principles; Administration; Environmental Planning, Protection and Conservation of the Environment; Integrated Environmental Impact Assessment; Environmental Audit and monitoring; Environmental quality standards; Environmental Restoration Orders, Environmental
Conservation Orders and Environmental Easements; Inspection, Analysis and Records; International Treaties, Conventions and Agreements; National Environment Tribunal, Environmental Offences, Regulations; Environmental Planning; Protection and Conservation of the Environment; Integrated Environmental Impact Assessment; Environmental Audit and Monitoring; Environmental Quality Standards; Environmental Restoration Orders, Environmental Conservation Orders and Environmental Easements; Inspection, Analysis and Records; International Treaties, Conventions and Agreements; National Environment Tribunal; Environmental Offences and Regulations.

Part II of the Environment Management & Coordination (Amendment) Act, 2015 states that every person in Kenya is entitled to a clean and healthy environment and has the duty to safeguard and enhance the environment. In order to partly ensure this is achieved, Part VI of the Act directs that any new programme, activity or operation should undergo an integrated environmental impact assessment and a report prepared for submission to the National Environmental Management Authority (NEMA), who in turn may issue a license as appropriate. Part VII in the same spirit calls for Environmental Audit and Monitoring to ascertain Environmental Quality are achieved as required in Part VIII of the act.

MoE, and KPLC are committed to ensuring that all its activities are carried out in an environmentally friendly manner throughout the three major project phases of design, construction and operation of the proposed project.

The Act gives guidelines and direction on management of the following environmental concerns as captured in the following subsidiary regulations

I. Water quality standards

The Cabinet Secretary shall, on the recommendation of the Authority—
(a) establish criteria and procedures for the measurement of water quality;
(b) recommend to the Authority minimum water quality standards for all the waters of Kenya and for different uses, including - drinking water; water for industrial purposes; water for agricultural purposes; water for recreational purposes; water for fisheries and wildlife; and for any other prescribed water use;
(c) analyse conditions for the discharge of effluents;

(d) issue guidelines regulations for or the preservation of fishing areas, aquatic areas, water sources and reservoirs and other areas, where water may need special protection;
(e) recommend measures necessary for the treatment of effluents before
being discharged into the sewerage system; and
(f) make any other recommendation that may be necessary for the
monitoring and control of water pollution.
The Authority shall consult and take into consideration the views of lead agencies before making the recommendations under this subsection.

II. Air quality standards

(1) The Cabinet Secretary shall, on the recommendation of the Authority —
(a) establish criteria and procedures for the measurement of air quality;
(b) set—(i) ambient air quality standards;
(ii) occupational air quality standards, emission standards for various Sources;
(iii) criteria and guidelines for air pollution control for both mobile and stationary sources; (iv) any other air quality standards;
(c) determine measures necessary to reduce existing sources of air pollution by requiring the redesign of plants or the installation of new technology or both, to meet the requirements of standards established under this section;
(d) issue guidelines to minimize emissions of greenhouse gases and identify suitable technologies to minimize air pollution; and
(e) do all such things as appear necessary for the monitoring and controlling of air pollution.
(2) The Authority shall consult and take into consideration the views of lead agencies before making the recommendations under subsection (1).

III. Standards for waste

The Cabinet Secretary shall, on the recommendation of the Authority—
(1) identify materials and processes that are dangerous to human health and the environment;
(2) issue guidelines and prescribe measures for the management of the materials and processes identified under subsection (1);
(3) prescribe standards for waste, their classification and analysis, and formulate and advise on standards of disposal methods and means for such wastes; or
(4) issue regulations for the handling, storage, transportation, segregation and destruction of any waste.

IV. Regulations of toxic and hazardous materials etc.

The Cabinet Secretary may, on the advice of the Authority make regulations prescribing the procedure and criteria for—

(a) classification of toxic and hazardous chemicals and materials in accordance with their toxicity and the hazard they present to the human health and to the environment;
(b) registration of chemicals and materials;
(c) labelling of chemicals and materials;
(d) packaging for chemicals and materials;
(e) advertising of chemicals and materials;
(f) control of imports and exports of toxic and hazardous chemicals and materials permitted to be so imported or exported;
(g) distribution, storage, transportation and handling of chemicals and materials;
(h) monitoring of the effect of chemicals and their residue on human health and the environment;
(i) disposal of expired and surplus chemicals and materials; and
(j) restriction and banning of toxic and hazardous substances and energy.

V. Standards of pesticides and toxic substances

The Cabinet Secretary shall, on the recommendation of the Authority—
(a) determine standards for the concentration of pesticide residues in raw agricultural commodities.
(b) establish standards to regulate the importation, exportation, manufacture, storage, distribution, sale, use, packaging, transportation, disposal and advertisement of pesticides and toxic substances in consultation with the relevant organizations;
(c) establish procedures for the registration of pesticides and toxic substances;
(d) determine measures to ensure proper labelling and packaging of pesticides and toxic substances;
(e) determine measures for monitoring the effects of pesticides and toxic substances on the environment;
(f) determine measures for the establishment and maintenance of laboratories to operate as standards laboratories for pesticides and toxic substances; and
(g) determine measures for the establishment of enforcement procedures and regulations for the storage, packaging and transportation of pesticides and toxic substances.

VI. Standards for noise

The Cabinet Secretary shall, on the recommendation of the Authority—
(a) recommend minimum standards for emissions of noise and vibration pollution into the environment as are necessary to preserve and maintain public health and the environment;
(b) determine criteria and procedures for the measurement of noise and vibration pollution into the environment;
(c) determine criteria and procedures for the measurement of sub-sonic vibrations;
(d) determine standards for the emission of sub-sonic vibrations which are likely to have a significant impact on the environment:

(e) issue guidelines for the minimization of sub-sonic vibrations, referred to in paragraph (d) from existing and future sources;
(f) determine noise level and noise emission standards applicable to construction sites, plants, machinery, motor vehicles, aircraft including sonic bonus, industrial and commercial activities;
(g) determine measures necessary to ensure the abatement and control of noise from sources referred to in paragraph (f); and
(h) issue guidelines for the abatement of unreasonable noise and vibration pollution emitted into the environment from any source.

VII. Radiation Standards

(1) Subject to the provisions of the Radiation Protection Act, (Cap. 243) the Cabinet Secretary, on the recommendation of the Authority, shall —
(a) establish the standards for the setting of acceptable levels of ionizing and other radiation in the environment; and
(b) establish criteria and procedures for the measurement of ionizing and other radiation.
(2) The Authority shall —
(a) inspect and examine any area, place or premises or any vehicle, vessel, boat or any carrier of any description in or upon which the Authority has reasonable cause to believe that radioactive material or any source of ionizing radiation is stored, used, transported or disposed of;
(b) examine any person with respect to matters under this Act, where there is reasonable cause to believe that that person is contaminated with radioactive material, or is in unlawful possession of an ionizing radiation source;
(c) in collaboration with the Radiation Protection Board, conduct an ionizing radiation monitoring programme and advise on ionizing and radiation control and protection measures;
(d) maintain records of release of radioactive contaminants into the environment;
(e) keep records of baseline data on radiation in the environment;
(f) maintain a register of all radioactive substances imported into Kenya; and
(g) do all such things as may be necessary for the monitoring and control of pollution from radiation.

VIII. Standards for the control of noxious smells

The Authority shall, in accordance with the relevant lead agencies, establish—
(a) procedures for the measurement and determination of noxious smells;
(b) minimum standards for the control of pollution of the environment by noxious smells; or
(c) guidelines for measures leading to the abatement of noxious smells, whether from human or from naturally occurring phenomena.

KPLC will abide to the above standards in all the phases of this project.

Other legislations in Kenya that govern Environmental management and relevant to this project include:

d) County Government Act, 2012

This Act makes provisions for county governments' powers, functions and responsibilities to deliver services and for connected purposes. Part VIII of the act on Citizen Participation (87) (b) emphasizes on the right of citizens to participate to any development projects prior to their implementation. Section 135 (1) states that the Cabinet Secretary may make regulations for the better carrying out of the purposes and provisions of this Act and such Regulations may be made in respect of all county governments and further units of decentralization generally or for any class of county governments and further units of decentralization comply to the set regulations and by laws.

This is the primary law governing the development of counties and thereby will be key during implementation of the AFD/EU/EIB LMCP. All organs established under this law should be consulted and approvals sought from the relevant authorities in relation to the relevant County Government where the project will be implemented.

e) Urban Areas and Cities Act No. 13 of 2011

This is an act of Parliament to give effect to Article 184 of the Constitution; to provide for the, classification, governance and management of urban areas and cities; to provide for the criteria of establishing urban areas, to provide for the principle of governance and participation of residents and for connected purposes. This act will apply where subprojects will be located within urban areas and cities and KPLC will ensure compliance to the provisions of the act.

f) Land Act, 2012

This Act gives effect to Article 68 of the Constitution, to revise, consolidate and rationalize land laws; to provide for the sustainable administration and management of land and land based resources, and for connected purposes. Section 110(1) of the Act provides that land may be acquired compulsorily under this if the Commission certifies, in writing, that the land is required for public purposes or in the public interest as related to and necessary for fulfillment of the stated public purpose. In such an acquisition, this Act, in section 111(1) provides that just compensation shall be paid promptly in full to all persons whose interests in the land have been determined. The procedure for land acquisition is laid out in Part VIII of the Act. KPLC will ensure compliance to the provisions of this Act in all the phases of this project.

g) The Land and Environment Court Act, 2011

This is an Act of Parliament to give effect to Article 162(2) (b) of the Constitution; to establish a superior court to hear and determine disputes relating to the environment and the use and occupation of, and title to, land, and to make provision for its jurisdiction functions and powers, and for connected purposes. The principal objective of this Act is to enable the Court to facilitate the just, expeditious, proportionate and accessible resolution of disputes governed by this Act. Section

13 (2) (b) of the Act outlines that in exercise of its jurisdiction under Article 162 (2) (b) of the Constitution, the Court shall have power to hear and determine disputes relating to environment and land, including disputes:

- Relating to environmental planning and protection, trade, climate issues, land use planning, title, tenure, boundaries, rates, rents, valuations, mining, minerals and other natural resources;
- Relating to compulsory acquisition of land;
- Relating to land administration and management;
- Relating to public, private and community land and contracts, chooses in action or other instruments granting any enforceable interests in land; and
- Any other dispute relating to environment and land.

KPLC will ensure compliance to the provisions of this Act in all the phases of this project.

h) Water Act, 2016

Part II, section 18, of the Water Act, 2016 provides for national monitoring and information system on water resources. Following on this, sub-section 3 allows the Water Resources Authority (WRA) to demand from any person or institution, specified information, documents, samples or materials on water resources. Under these rules, specific records may require to be kept by a facility operator and the information thereof furnished to the authority.

The Water Act Cap 372 vests the rights of all water to the state, and the power for the control of all body of water with the Cabinet Secretary, the powers is exercised through the Cabinet Secretary and the Director of water resources in consultation with the water catchments boards, it aims at provision of conservation of water and appointment and use of water resources. Part II Section 18 provides for national monitoring and information systems on water resources. Following on this, Sub-section 3 allows the Water Resources Authority to demand from any person, specified information, documents, samples or materials on water resources. Under these rules, specific records may be required to be kept and the information thereof furnished to the authority on demand.

Section 76 states that no person shall discharge any trade effluent from any trade premises into sewers of a licensee without the consent of the licensee upon application indicating the nature and composition of the effluent, maximum quantity anticipated, flow rate of the effluent and any other information deemed necessary. The consent shall be issued on conditions including the payment rates for the discharge as may be provided under section 77 of the same Act.

KPLC will ensure compliance to the provisions of this Act in all the phases of this project.

i) Energy Act of 2019

This is an Act of Parliament signed into law in 2019 with key objectives of:

To consolidate the laws relating to energy, to provide for National and County Government functions in relation to energy, to provide for the establishment, powers and functions of the energy sector entities; promotion of renewable energy; exploration, recovery and commercial utilization of geothermal energy; regulation of midstream and downstream petroleum and coal activities; regulation, production, supply and use of electricity and other energy forms; and for connected purposes.
If there is a conflict between this Act and any other Act, this Act shall prevail on the following matters—
(a) the importation, exportation, generation, transmission, distribution, supply or use of electrical energy; or
(b) the exploration, production, transportation, distribution, and supply of any other form of energy;
The act provides for the establishment of:
The Energy and Petroleum Regulatory Authority (EPRA) whose core function is to regulate generation, importation, exportation, transmission, distribution, supply and use of electrical energy with the exception of licensing of nuclear facilities.
Under the Act, licensing of nuclear facilities is now the mandate of the Nuclear Power and Energy Agency (NPEA). The functions of the agency includes: 56 (1)- be the nuclear energy programme implemeting organisation and promote the development of nuclear electricity generation in kenya.

The Act also provides for the establishment of the Rural Electrification and Renewable Energy Corporation (REREC). The Functions of REREC includes: 44 (J) develop, promote and manage in collaboration with other agencies, the use of renewalbe energy and technologies, including but not limited to biomass(bio-diesel, bio ethanol, charcoal, fuel wood, bio-gas) municiapl waste, solar, wind, tidal waves, small hydro power, and co-generation excluding geothermal.
Section 98 of the Act stipulates that:
1) The Authority shall, in granting or rejecting an application for a licence or permit, take into consideration among other factors:
   (a) the impact of the undertaking on the social, cultural or recreational life of the community;
   (b) the need to protect the environment and to conserve the natural resources in accordance with the environmental, health, and maritime laws and international maritime treaties ratified by Kenya and other guidelines developed by the Authority;
   (c) compliance with Occupational Safety and Health Act or other safety and health standards recommended by the Authority in consultation with the relevant statutory body;
   (d) compliance this Act and the relevant Kenyan Standard and in the absence of such standard, any international standard recommended by the Authority in consultation with the Kenya Bureau of Standards;
   (e) land use or the location of the undertaking; ...

   (h) the ability of the applicant to operate in a manner designed to protect the health and safety of users of the service for which the licence or permit is required and other members of the public who would be affected by the undertaking;
Section 99 stipulates that an application for a licence must be accompanied with such environmental liability policy as shall be prescribed by the Cabinet Secretary.
Section 100 part 2 (a) stipulates. it's a requirement that the licensee shall comply with all applicable environmental, health and safety laws;
In section 121 among the factors to be considered before granting a license include to comply with the need to protect the environment and to conserve the natural resources in accordance with the Environmental Management and Coordination Act;
Section 167 (e) of the Act requires… providing for securing the safety of the public from danger, personal injury or damage to property arising from the generation, transmission, distribution, retail or use of electrical energy.
KPLC will ensure compliance to the provisions of this Act in all the phases of this project.

j) The Way leaves Act Cap 292:

The Government may carry any sewer, drain or pipeline into, through, over or under any lands whatsoever but may not in so doing interfere with any existing building. The Government shall make good all damage done, and shall pay compensation to the owner of any tree or crops destroyed or damaged, in the execution of any power conferred by this Act.

KPLC will ensure compliance to the provisions of this Act in all the phases of this project.

k) Penal Code Act (Cap.63)

Section 191 of the penal code states that if any person or institution that voluntarily corrupts or foils water for public springs or reservoirs, rendering it less fit for its ordinary use is guilty of an offence. Section 192 of the same Act says a person who makes or vitiates the atmosphere in any place to make it noxious to health of persons /institution, dwelling or business premises in the neighborhood or those passing along public way, commit an offence. KPLC shall observe the guidelines as set out in the environmental management and monitoring plan laid out in this report as well as the recommendation provided for mitigation/minimization/avoidance of adverse impacts arising from the project activities.

l) Wildlife Conservation and Management Act, 2013

This Act provide for the protection, conservation, sustainable use and management of wildlife in Kenya and for connected purposes. The law has as one of its guiding principles the devolution of conservation and management of wildlife to landowners and managers in areas where wildlife occurs, through in particular the recognition of wildlife conservation as a form of land-use, better access to benefits from wildlife conservation, and adherence to the principles of sustainable utilization.
KPLC will ensure compliance to the provisions of this Act in all the phases of this project.

m) The Forestry Services Act, 2005

The Act led to the establishment of Kenya Forest Service which is charged with management of forests in consultation with the forest owners. The body enforces the conditions and regulations pertaining to logging, charcoal making and other forest utilization activities.
To ensure community participation in forest management, the service collaborates with other organizations and communities in the management and conservation of forests and for the utilization of the biodiversity.

Section 43 subsection 1 provides that if mining, quarrying or any other activity carried out in the forest, shall, where activity concerned is likely to result in forest cover depletion, the person responsible shall undertake compulsory re-vegetation immediately upon the completion of the activity.

KPLC will ensure compliance to the provisions of this Act in all the phases of this project.

n) Occupational Safety and Health Act, 2007

The Act provides for the safety, health and welfare of workers and all persons lawfully present at work place, as well as the establishment of the National Council for Occupational Safety and Health and for connected purposes.

Section 3(1) and (2) of the Act explains that it applies in all workplaces where any person is at work, either temporarily or permanently. It expounds on the purpose, which is to secure the safety, health and welfare of persons at work as well as protecting persons other than persons at work against risks resulting from, or connected to, activities at workplace. Further, sections 43 and 44 of part V give regulations on registration of work places. This shall be considered at the construction, implementation and decommissioning phases of the project.

Health: The premise must be kept clean; a premise must not be overcrowded. The circulation of fresh air must secure adequate ventilation of workrooms. There must be sufficient and suitable lighting in every part of the premise in which persons are working or passing. There should also be sufficient and suitable sanitary conveniences separate for each sex, must be provided subject to conformity with any standards prescribed by rules. Food and drinks should not be partaken in dangerous places or workrooms. Provision of suitable protective clothing and appliances including where necessary, suitable gloves, footwear, goggles, gas masks, and head covering, and maintained for the use of workers in any process involving exposure to wet or to any injurious or offensive substances.

Safety: Fencing of premises and dangerous parts of other machinery is mandatory. Training and supervision of inexperienced workers, protection of eyes with goggles or effective screens must be provided in certain specified processes. Floors, passages, gangways, stairs, and ladders must be soundly constructed and properly maintained and handrails must be provided for stairs. Special precaution against gassing is laid down for work in confined spaces where persons are liable to overcome by dangerous fumes. Air receivers and fittings must be of sound construction and properly maintained. Adequate and suitable means for extinguishing fire must be provided in addition to adequate means of escape in case of fire must be provided.

Welfare: An adequate supply of both quantity and quality of wholesome drinking water must be provided. Maintenance of suitable washing facilities, accommodation for clothing not worn during working hours must be provided. Sitting facilities for all female workers whose work is done while standing should be provided to enable them take advantage of any opportunity for resting. Every premise shall be provided with readily accessible means for extinguishing fire and persons trained in the correct use of such means shall be present during all working periods.

Regular individual examination or surveys of health conditions of industrial medicine and hygiene must be performed and the cost will be met by the employer. This

will ensure that the examination can take place without any loss of earning for the employees and if possible within normal working hours. The (OSH) Act provides for development and maintenance of an effective program of collection, compilation and analysis of occupational safety. This will ensure that health statistics, which shall cover injuries and illness including disabling during working hours, are adhered. The environmental management plan (EMP) advices the Proponent on safety and health aspects, potential impacts, personnel responsible for implementation and monitoring, frequency of monitoring, and estimated cost.

KPLC will ensure compliance to the provisions of this Act in all the phases of this project.

o) Work Injury and Benefits Act, (WIBA) 2007

This Act provides for compensation to employees for work related injuries and disease contracted in the course of their employment and for connected purposes. Key sections of the Act include the obligations of employers; right to compensation; reporting of accidents; compensation; occupational diseases; medical aid etc. In case of any accidents or incidents during the project cycle, this Act will guide the course of action to be taken.

p) The Traffic Act Cap 403 0f 2009

This Act consolidates the law relating to traffic on all public roads. Key sections include registration and licensing of vehicles; driving licenses; driving and other offences relating to the use of vehicles on roads; regulation of traffic; accidents; offences by drivers other than motor vehicles and other road users. Many types of equipment and fuel shall be transported through the roads to the proposed site. Their registration and licensing will be required to follow the stipulated road regulations. The Act also prohibits encroachment on and damage to roads including land reserved for roads. KPLC will ensure observance of the provisions of the Act.

q) The Civil Aviation Act No. 21 of 2013

The provisions of this Act or any regulations made there under shall, except where expressly or by implication excluded, apply to—

- All aircraft whilst in or over any part of Kenya;
- All Kenya aircraft and the crew and other persons on board wherever they may be; and
- All aerodromes and service providers within aerodromes.

The provisions of this Act shall not, except where expressly included or if the Cabinet Secretary so directs by order published in the Gazette, apply to state aircraft or to any class or classes of state aircraft. All aircraft shall be subject to the requirements of this Act in respect of rules of the air.
KPLC will ensure compliance to the provisions of this Act in all the phases of this project.

r) National Land Policy 2009

The National Land Policy (NLP) has a vision to guide the country towards a sustainable and equitable use of land. The land policy calls for immediate actions to addressing environmental problems that affect land such as degradation, soil erosion and pollution. For instance, the policy stipulates the principle of conservation and management of land based natural resources, the principle of protection and management of fragile and critical ecosystems including wetlands and arid lands. The policy further calls for extensive overhauls to current policies and institutions in an attempt to address chronic land tenure insecurity and inequity. The National Land Policy designates all land in Kenya as public, private (freehold or leasehold tenure), or community/trust land, which is held, managed and used by a specific community. This land policy has thus been formulated to address the critical issues of land administration, access to land, land use planning, restitution of historical injustices, environmental degradation, conflicts, unplanned proliferation of informal urban settlements, outdated legal framework, institutional framework and information management.

KPLC will ensure compliance to the provisions of this Policy in all the phases of this project.

s) National Museums and Heritage Act 2006

This Act provides for the establishment, control, management and development of national museums and the identification, protection, conservation and transmission of the cultural and natural heritage of Kenya and for connected purposes. **The Act outlines the functions of the** National Museums as follows;

- Serve as national repositories for things of scientific, cultural, technological and human interest;
- Serve as places where research and dissemination of knowledge in all fields of scientific, cultural, technological and human interest may be undertaken;
- Identify, protect, conserve and transmit the cultural and natural heritage of Kenya; and
- Promote cultural resources in the context of social and economic development.

The Act outlaws' exploration of monument and antiquity through section 27 part one which states that; Unless authorized by an exploration license issued by the Minister after consultation with the Board, no person shall by means of excavation or surface operations search for a buried monument or buried part of a monument, or for a buried antiquity, whether or not in a protected area.

The Act further notes that if a person discovers a monument or object of archaeological or paleontological interest, the person shall, within seven days, give notice thereof, indicating the precise site and circumstances of the discovery, to the National Museums, and in the case of an object, shall deliver the object to the National Museums or to the District Commissioner now called county commissioner to keep it for any particular purpose or for any particular period.

The Act further notes in subject to section 27, no person shall move a monument or object of archaeological or paleontological interest from the place where it has been discovered otherwise than in such manner and to such place as may be allowed by an exploration license, or by written permit from the Minister after consultation with the National Museums.

Section 52 of the Action describes offences as follows; A person who—

- Without just cause fails to furnish the National Museums with full particulars of all objects in his possession which he knows or believes to be antiquities or protected objects, after being required in writing so to do within the period lawfully specified by a notice, as provided under section 47;
- Willfully destroys or damages an antiquity or protected object;
- Removes an antiquity or protected object contrary to section 48; or Sells or otherwise parts with ownership or possession of a protected object, or sells or buys or gives or takes by way of exchange an antiquity, contrary to section 49, commits an offence and shall on conviction be liable to a fine not exceeding one million shillings or twice the value of the antiquity or protected object concerned, whichever is the greater, or to imprisonment for imprisonment for a term not exceeding twelve months or to both such fine and imprisonment.

Chance Find Procedure

Regulatory and Other Requirements

The primary legislation on cultural heritage issues is the National Museums Heritage Act, 2006 (which updated and replaced the National Museums Act, 1983), the Antiquities Monuments Act 1983 and is enshrined in the requirements the provisions of the Environmental Management and Coordination Act (EMCA) which defines the Environmental and Social Impact Assessment (ESIA) process.

The National Museums Heritage Act sets out the overarching administrative processes for protecting and preserving cultural heritage and management by the NMK. As there are no designated monuments or sites within the immediate Project's area of influence, the heritage legislation only has a limited bearing on the Project's activities, however the project will take precautionary measures for handling any potentially significant chance finds through its implementation of the chance find procedure and requirement presented in subsequent sections of this procedure.

Physical cultural resources (PCR) within Environmental Assessment

The Client addresses impacts on PCR as an integral part of the EA process by undertaking an initial screening, developing terms of reference, collecting baseline data, conducting the impact assessment, and formulating mitigating measures and a management plan for PCR. As part of the public consultations required in the EA process, if need be, the consultative process for the PCR component of the project will include relevant project-affected groups, concerned government authorities, and relevant nongovernmental organizations in documenting the presence and significance of PCRs, assessing potential impacts, and exploring avoidance and mitigation options. Normally, the findings of the physical cultural resources component of the EA are disclosed as part of, and in the same manner as, the EA report. However, exceptions to such disclosure would be considered when the Client, in consultation with the Bank and persons with relevant expertise, determines that disclosure would compromise or jeopardize the safety and integrity of the physical cultural resources involved or would endanger the source of information about the PCRs. In such cases, sensitive information relating to these particular aspects may be omitted from the EA report.

The national agency responsible for cultural matters in Kenya is the National Museums of Kenya (NMK).

Prior to commencement of projects in culturally sensitive areas the proponent would contact NMK who would send representatives to review the site and prepare a report. The report would entail advice on professional approach to the proposed works to ensure minimal damage to the encountered items. In the event that chance finds are encountered the following procedure shall apply:

Role of the contractor and Client

- Reporting of chance finds: The contractor or officer supervising the project would report the finds to the local administration such as the local chief or the Assistant County Commissioner;
- The local administration would then report the find to NMK.
- The contractor would report back to client who would notify NMK in the event that further artifacts are encountered
- The client will make budget available for training the contractor and his/her staff and workers on how to go about reporting PCRs and safeguarding these properties until NMK is alerted and further processing of the announcement is made viz-a-viz the formulation and implementation of appropriate avoidance and/or mitigating measures.

Role of NMK

- NMK would temporarily stop the works to conduct an assessment and prepare a report. The period of stoppage is from 10 days to 21 days depending on the complexity of the project; Retrieve movable artifacts and preserve immovable ones;
- NMK would also map out the area to be preserved during the investigation period and arbitrate between the community and developers in the event of dispute;
- NMK to Circulate the cultural impact assessment report to the developer, NEMA, relevant lead agencies and the community.

Measures for Care of Chance Finds

Upon retrieval of movable artifacts and conservation of immovable ones, NMK would proceed with segregation and dating of the artifacts and determination of their significance; Segregated artifacts would be stored in the NMK archeological stores according to their size and dates and labeled with the geographical area where found; The artifacts may be displayed in an exhibition when required or published to enrich the cultural heritage.

Chance Find Report

Chance Find Report				
Date (DD/MM/YYYY)	**Time (xx:xx)**	**Site Name**	**GPS Coordinates (Northing)**	**GPS Coordinates (Easting)**
Description of Find				
Proximity to Contractor Activity				
Sensitivity				
Vulnerability				
Recommended Action Description				
Site Checklist		**Yes / No**	**Comment**	
Responsible persons notified				
Coordinates verified				
Site Marked				
Site Secured				
Photograph(s)				
Impacts Assessed				
Actions Agreed				
Authorised Instruction				
National Museums Kenya Representative		**Position**	**Signed (Name)**	
Kenya Power Representative		**Position**	**Signed (Name)**	

KPLC will comply to the provisions of this Act in all the phases of this project.

t) Draft National E-Waste Management Strategy 2019

The National E-Waste Management Strategy is a five-year plan covering the period 2019/20 to 2023/24. However, its vision and aspiration spans a medium to long term period of about 10 years. This strategic direction is pertinent in aligning the short to medium-term interventions into the perspective plan for e-waste management.

The Vision of the Strategy is "Towards Zero negative impact of e-Waste in Kenya by 2030" and its goal is to "achieve a sustainable e-waste management system in Kenya."
The purpose of the strategy is to analyze the situation and prescribe ways to address the problems. The document aims at helping leaders and stakeholders at all levels to understand the need to take urgent action in diverse fronts through collaborative process to minimize negative impacts of e-waste on the environment and human health

This strategy is to be used along with other strategic documents guiding priorities of East African Communications Organization (EACO) such as the e-waste model Policy for EACO member states and the EACO strategic plan. The National e-waste management strategy has been developed on the backdrop of the e-waste challenges posed by the rapid diffusion of information and communications technologies (ICTs) in the country economy. These challenges range from increasing stock piles of e-waste in the region to potential environmental and health problems associated with e-waste. Another key factor driving the formulation of the e-Waste Management strategy is the need to build the capacity of the county governments in sustainable collection and management of e-waste. There are a number of initiatives leading to the development of the national e-Waste management Strategy. Below are some of the key factors leading to the formulation of the strategy.

- Lack of a readiness assessment within both the national and county governments. The country has not carried an assessment to inform the situation of e-waste in Kenya
- The establishment of the EACO regional e-waste management steering committee and taskforce within the armpit of the EACO working group 10. The regional steering committee has prioritized e-waste management activities and their mainstreaming within EACO
- Establishment of national e-waste management steering committees and/or e- waste management technical working teams Strategic Direction

E-waste calls for proper management because it poses a number of challenges.

- Environmental consequences including Air pollution, especially when e-waste is burnt, Waste management problem of non-biodegradable equipment, toxicity and radioactive nature of e-waste degrades the environment and blockage of water runoff channels
- Economic consequences including Substantial public spending on health care, Investments in complex and expensive environment remediation technologies, Loss / waste of resources that can be recycled for re-use, loss of opportunities for recycling industries and employment and Ozone depletion leading to unpredictable weather conditions.

Social consequences including E-waste effects on people's health (e.g. lead poisoning and cancerous mercury), Growth of informal waste disposal centers in the neighborhood, Informal trade and management of e-waste and Lack of appreciation for ICT

KPLC will ensure compliance to the provisions of this e-waste management strategy.

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u) International Conventions and Treaties Ratified by Kenya

Kenya has ratified a number of international conventions pertinent to land administration, environmental protection and human rights. Some of these conventions are:

- Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar Convention) 2001;
- United Nations (UN) Convention on Biological Diversity 1994 UN Framework Convention on Climate Change, 1992;
- Kyoto Protocol to the United Nations Framework Convention on Climate Change
- Convention on the Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal (Basel Convention) 1989;
- Montreal Protocol on Substances that Deplete the Ozone Layer Vienna Convention on the Ozone Layer 1985;
- UN Convention on the Law of the Sea (UNCLOS), Montego Bay, 1982;
- Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention) 1981;
- Convention Concerning the Protection of the World Cultural and National Heritage (World Heritage Convention), Paris, 1975;
- Convention on the Conservation of Migratory Species of Wildlife Animals, 1979
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (amended 1992);
- African Convention on Conservation of Nature and Natural Resources, 1968 Convention on International Trade in Endangered Species of Wild Fauna and Flora

KPLC will ensure compliance to all the conventions and treaties ratified by Kenya in all the phases of this project.

4.5 Description of European Investment Bank Environmental and Social Standards

a) Introduction

This ESMF has been designed so that all sub-projects that will be implemented under AFD/EU/EIB LMCP comply with the Environmental and Social Standards of the European Investment Bank and all the applicable environmental policies, laws and regulations of the Government of Kenya (GoK). In this chapter, the European Investment Bank's Environmental and Social Standards and their applicability are discussed. The European Investment Bank's Environmental and Social Standards are outlined below and summarized in the table and thereafter a determination has been made on the standards that will be triggered as a result of the AFD/EU/EIB Last Mile Connectivity Project.

The European Investment Bank's 10 Environmental and Social Standards are:

1. Assessment and Management of Environmental and Social Impacts and Risks
2. Pollution Prevention and Abatement
3. EIB Standards on Biodiversity and Ecosystems
4. EIB Climate-Related Standards
5. Cultural Heritage
6. Involuntary Resettlement
7. Rights and Interests of Vulnerable Groups
8. Labour Standards
9. Occupational and Public Health Safety and Security
10. Stakeholder Engagement

The environmental issues that might arise as a result of the AFD/EU/EIB Last Mile Connectivity Project may trigger nine of the ten EIB Environmental and Social Standards except one namely:
EIB Climate-Related Standards

A complete description of the Bank Environmental and Social Standards and their triggers for applicability is summarized in Annex 1 to be used as part of the environmental and social screening process presented in chapter 9 of this ESMF.**Table 3: Summary of European Investment Bank Environmental and Social Standards**

Operational Safeguard	**Objective**	**Trigger for the Standards**	**STANDARD TRIGGERED**	**JUSTIFICATION**
EIB Standard 01: Assessment and Management of Environmental and Social	(i) Foster and ensure promoter's senior management commitment to environment and social policies (ii)Assess cumulative environmental and social impacts of proposed project on environment	Though the proposed project will have insignificant impacts on the environment, the standard shall still be triggered as there will be minimal impacts to the host environment and communities. The project will also be constructed in residential areas and aims at increasing access to green energy thus people are directly	YES	The standard is triggered. The project activities shall not have significant impacts on proposed areas of implementation. No significant destruction of the environment shall take place and most of the HT and low voltage lines to be strung during construction phase shall be constructed along existing road reserves. Proposed installation of new transformers shall be

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
Impacts and Risks	(iii) Develop a continuous and dynamic environmental and social management systems (iv) Ensure systematic monitoring and evaluation throughout project cycle (v) Conduct meaningful public and stakeholder engagement throughout the project cycle	affected by the project. As such, their consultation throughout the project cycle is important		done in areas with minimal or no vegetation cover. The Screening results will further advise on the need of an ESMP or ESIA as necessary.
EIB Standard 01 on Assessment and Management of Environmental and Social Impacts and Risks requirements is in tandem with Kenya Legislation. EMCA Cap 387 section 58(1) requires that any proponent carrying out any undertaking listed in second schedule of the act shall before implementation of the project submit a project report to the Authority giving prescribed information about the project. Second schedule of EMCA Cap 387 lists projects with minimal environmental impacts in numbers 1&2. Part III of the Environmental Management and Coordination (Strategic Assessment, Integrated Impact Assessment and Environmental Audit) Regulations, 2018 states that every proponent undertaking a project listed in number 1&2 being low risk and medium risk projects of the second schedule of the Act shall prepare a project report for review and licensing as outlined.				
EIB standard 02: Pollution Prevention and Abatement	(i) Avoidance of deterioration in quality of human health and environment (ii) Reduce emissions of greenhouse gases and enhance resource efficiency (iii) Promotion of integrated approach to avoid shift of pollution from one environmental medium to	This standard is triggered as vehicles shall be used during transportation of materials to the site, there shall also be solid and liquid wastes released during construction phase of the projects. This is due to cuttings from conductors and trees while liquid wastes will mainly be sewage as there shall be people employed to work on various sites during construction.	YES	The standard is triggered. The project activities will result into generation of noise during construction. Accidental spills oil from vehicles and hazardous CCA applied to treat poles both will require proper handling and disposal. The Contractor shall put in place measures to ensure no release of hazardous wastes into the environment and any accidental spills will be cleaned and site rehabilitated according to NEMA

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
	another			guidelines. Atmospheric pollution from vehicle exhaust emissions shall be minimal and contractor shall be required to use vehicles and other fossil fuel equipment in good state of repair and services will be done in licensed service stations.
EIB standard 02 on Pollution Prevention and Abatement is in tandem with the Environmental Management and Coordination (Air Quality) Regulations, 2014. PART IV of the regulations requires continuous monitoring of emissions from all internal combustion engines of mobile sources. Section 25(1) states that no person shall allow for emission of visible air pollutants from a stationary or mobile vehicle in excess of the set out limits. PART II of the Environmental Management and Coordination (Waste Management) Regulations, 2006 bestows the responsibility of material conservation, appropriate use, segregation of wastes and contacting licensed waste handlers to transport and dispose wastes on the proponent. Section 50 of the Environmental Management and Coordination Act, Cap 387 stipulates the need for conservation of biological diversity and protection of indigenous property rights of local communities in relation to biodiversity.				
Biodiversity and Ecosystems	(i) Maintain integrity of important biodiversity areas and natural ecosystems functions (ii) Internalize biodiversity and ecosystems values in cost benefit analysis and project design (iii) Assess adherence to international conventions and consistency with relevant provisions in	The standard is triggered as the project shall affect some ecosystems during way leave clearance and construction as excavations will be done to ensure installation of poles. The ecosystems that will be affected are both natural and manmade.	YES	The standard is triggered. The project activities may result into minor alteration of ecosystem functions and loss of biodiversity in the entire project lifecycle. Although we do not intend to implement the project on any critical habitat and the HT lines shall be routed along road reserves. Some trees are likely to lost during trace clearance affecting biodiversity The service lines will be constructed using PVC cables and this will help minimize tree cutting.

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
	international agreements (iv) Engage local communities and indigenous peoples in decision making process (v) Implement adaptive measures to protect biodiversity and ecosystems (vi) Monitoring and reporting on promoters overall impact and achievements of the biodiversity actions			
EIB Standard 03 on Biodiversity and Ecosystem is in agreement with Kenyan regulation on Environmental Management and Coordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006. PART II of the regulation stipulates that no person is allowed to engage in any activity that is likely to lead to unsustainable use of natural resources. The regulation also provides for need to protect environmentally significant areas. Section 54 of EMCA Cap 387 also stipulates the need to protect environmentally significant areas in liaison with relevant stakeholders.				
EIB 04 Climate Related Standards	○ Ensure adherence to EIB commitment on Climate change and EU climate policy	This standard will not be triggered	NO	This standard is not triggered. The project activities shall not increase significant emissions of greenhouse gases in such a way as to alter climatic conditions.
The National Climate Change Framework Policy (Sessional paper No. 3 of 2016) advocates for low carbon development for sustainable development especially through embracing use of renewable energy.				
EIB 05: Cultural Heritage	○ Outline promoter's responsibilities in management and conservation of cultural	The standard is triggered as the project will be implemented in both natural and manmade environment which hosts artistic, religious	YES	The standard may be triggered if during project implementation some chance find may affect both tangible and intangible

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
	heritage	and non-visible cultural heritage features of importance to project affected communities and persons		heritage in such a manner that alters the people's quality of life or perceptions. The Contractor shall avoid siting poles on graves, shrines or interfering in anyway with gazette or traditionally respected heritage objects.
EMCA Cap 387; Section 43 stipulates the need to protect traditional interests of local communities. These interests could be within their residence, at the lake and river shores or in the forest. Section 69 of the Constitution of Kenya 2010 stipulates the need to eliminate processes likely to endanger the environment and encourages to utilization of environmental resources for the benefit of Kenyans Section 34 of the National Museums and Heritage Act, 2006 outlines the need to prohibit or restrict access thereto or any development thereof that is likely to damage areas of cultural interests.				
EIB 06: Involuntary Resettlement	(i) Avoid or minimize project – induced involuntary resettlement (ii) Avoid forced evictions and provide remedies should prevention fail (iii) Ensure lawful eviction where avoidance cannot be implemented (iv) Respect stakeholder rights that may be impacted by resettlement (v) Respect right to property of all affected persons and	This standard will be triggered especially when properties of persons are affected during way leave clearance. Way leave acquisition will ensure pruning or clearance of tall vegetation such as trees which are mostly planted and are therefore private property	YES	This standard maybe triggered as a precautionary as the project activities are of low significance to the environment; however, damages to crops and trees is likely hence individual owners will have to be compensated. The construction of MV power lines shall be constructed along road reserves and low voltage transformers installed in areas with nearby human settlement but in some cases, it may cross to private land or property which may need to be compensated The Contractor will acquire wayleaves which have no issues

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
	mitigate adverse impacts arising from loss of assets (vi) Ensure resettlement measures are designed and implemented through consultation and participation of project affected persons			but where disputes involuntary settlement is triggered, Contractor shall document all affected property countersigned by the owner, and present to KPLC for verification and Payment. KPLC will acquire wayleaves of significant importance like connections to public utilities where disputes arise and Grievance redress mechanism developed in this ESMF will be applied to resolve grievances ensuring respect and use of traditional and indigenous grievance resolution mechanisms for any affected communities.
Section 171 of the Energy Act 2019 stipulates the need to seek prior informed consent before entering private lands for purposes of constructing electric power supply lines. Section 172 of the Energy Act states that provided there is any damage on land during access, compensation shall be awarded in full or just compensation given in accordance with the law. Section 109 of the Land Act, 2016 outlines the need for just compensation for any damage resulting from entry into private land. Section 111 of the Land Act, 2016 states that if land is acquired compulsorily, just compensation shall be paid promptly in full to all persons whose interests in the land have been determined.				
EIB 07: Rights and Interests of Vulnerable Groups	(i) Protect rights and interests of vulnerable individuals and groups within scope of work (ii) Adopt gender sensitive approach to management of	This standard is triggered through nondiscriminatory distribution of electricity to all potential customers. Power shall be supplied equally to all customers.	YES	The standard is t triggered as the proposed project will be implemented in 32 counties and vulnerable groups will always be encountered despite the fact that the project is low risk consideration should

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
	environmental and social impacts (iii) Avoid adverse impacts of projects on livelihood of vulnerable persons (iv) Ensure early identification of vulnerable persons within scope of project (v) Ensure vulnerable and indigenous persons equally benefit form projects	In the counties where the project shall be implemented there are people categorized as vulnerable such as persons living with disabilities, older generations and widows. Thus they might not be able to recover from negative impacts of the project.		have made on level of interference with interests of vulnerable groups. This project will be implemented without any discrimination or special considerations.
Section 152G (1e) outlines the need to have in place measures to ensure effective protection to groups and people who are vulnerable such as women, children, the elderly and persons with disabilities. Section 25 of the Constitution of Kenya 2010 stipulates that; all public officers have the duty to address the needs of vulnerable groups within society including women, older members of society, persons with disabilities, children, youth, members of minority or marginalized communities and members of particular ethnic, religious or cultural communities				
EIB 08: Labour Standards.	(i) To foster and realize non-discrimination and fair and equal treatment and opportunity at work (ii) Promote the freedom of association and collective bargaining (iii) Ensure, develop and maintain a sound worker-management	This EIB Standard is triggered through the mandatory hiring process where contractors, suppliers and promoters shall be involved during implementation of the process of the project. This standard is triggered if a project is likely to have workers hired from local communities as within such social settings, the employer is likely to encounter cases of migrants, illiterate	Yes	The standard is triggered as the project will involve promoter's employees and first tier suppliers as well as contractors during implementation of the project. Areas in which construction of the power lines and installation of new transformers shall take place will therefore be work places of the employees. As such it shall be the mandate of the promoter to ensure safe working conditions, provide adequate welfare

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
	relationship (iv) Promote compliance with national labour and employment laws and with internationally recognized labour standards as defined by the ILO, particularly its Core Labour Standards (v) Protect workers, including vulnerable categories (migrants, indigenous peoples or illiterate workers) and workers engaged by promoters and first tier/direct suppliers from unacceptable forms of labour and employment practices, exploitation and violation of the core labour rights and; (vi) Avoid the use of forced and child labour	workers as well as indigenous peoples. The employer shall also be required to observe gender balance when hiring workers. As the project shall mostly involve field works, protection of workers from any sort of harassment is important both from within and without the work environment ***Under AFD/EU/EIB LMCP, SHE has prepared this ESMF and will comply with national Labour regulations which outline the importance of managing employee welfare and providing suitable work environment for all workers.***		facilitates and accommodation when necessary. Part of the work involved during project implementation shall require involvement of local communities to enhance project acceptance. As such protection of their rights to prevent any form of harassment shall be ensured by the promoter. Applicable to take care of working conditions, pay rates, ages and rights of workers.
EIB Labour Standard 08 requirements is in tandem with Kenya Legislation. OSHA 2007 Section 6 (1) requires every occupier to ensure the safety, health and welfare at work of all persons working in his workplace. Section 6 (2C) states that it is the duty of occupier to provide such information, instruction, training and supervision as is necessary to ensure the safety and health at work of everyone employed.				
EIB 09: Occupational	(i) To promote and protect the health and safety of	This policy is triggered by any project (including any sub-project under a sector	Yes	The standard is triggered as project activities will have occupational and public

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
and Public Health, Safety and Security	employees at work throughout the project life cycle by ensuring safe, healthy, hygienic and secure working and accommodation conditions and effective a working environment that respects and safeguards the right to privacy, and when appropriate the enjoyment of the highest attainable standard of physical and mental health of workers and their families. (ii) Ensure that promoters duly anticipate, avoid or minimize and effectively mitigate risks and adverse impacts to the health and safety of host communities within the projects determined area of influence as well as end users during construction and operation phases (iii) Help promote public health and safety across the projects area of influence by inter alia supporting and	investment or financial intermediary) with the potential to cause significant impact on employees as well as host communities. This Standard can be triggered if a project affects public safety as well as employee safety. This is because the workers have to carry out activities as stipulated by the employer while such activities are likely to result in cases of pollution, electrocution as well as minimal damage to vegetation such as tree branches within project areas. The public shall also be affected as a result of pollution cases arising from occupier operations, cases of electrocution and possible injuries from falling tree branches		health impacts on workers and affected communities. The proposed project shall provide employment opportunity to workers and create opportunities for development of other businesses within various Counties. As such the promoter shall be required to create awareness with the aim of promoting occupational and public safety and security. In ensuring safety of workers, the promoter shall be required to provide relevant information and personal protective equipment to prevent exposure to hazards during construction of project. The promoter is greatly tasked and mandated by the national Occupational Safety and Health Act, 2007 to ensure workplace safety in all aspects of construction without compromising safety of the public that access the designated workplaces. The promoter shall therefore be required to provide signage for easy identification of hazards associated with the work processes. The dignity of workers affected by project operations shall also be upheld by the promoter.

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
	promoting programmes which aim at preventing the spread of major communicable diseases (iv) Ensure the provision of private or public security to protect the projects workers and assets consistent with international human rights standards and principles (v) Ensure effective access to grievance mechanism and recourse to remedy for all project workers and members of the public in cases of violations of their rights falling within the scope			
The Occupational Safety and Health Act and its subsidiary legislations address issues pollution and handling of hazardous substances in the work environment. Such are stipulated under The Factories and Other Places of Work (Hazardous Substances) Rules 2007 and The Factories and Other Places of Work (Noise Prevention and Control) Rules 2005 Issues of environmental pollution and public health are also addressed under Environmental Management and Coordination Act 1999 and its subsidiary legislations i.e. Environmental Management and Coordination (Noise and Excessive Vibration Pollution) Control Regulations 2009 and Environmental Management and Coordination (Waste Management) Regulations 2006. The regulations stipulate the amount of noise required in every occupational and residential setting as well as the need to regulate the amounts of noise released into the environment as a result of work done. The regulations also stipulate the manner in which employers are required to handle hazardous substances as well as dispose such substances without interfering with the state of environment and welfare of the public				

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
EIB 10: Stakeholder Engagement	The objective of this policy is to (i) Establish and maintain a constructive dialogue between the promoter, the affected communities and other interested parties throughout the project life cycle (ii) Ensure all stakeholders are properly identified and engaged (iii) Engage stakeholders in the disclosure process, engagement and consultations in an appropriate manner throughout the project life cycle in line with the principles of public participation, non-discrimination and transparency (iv) Ensure that the relevant stakeholders including commonly marginalized groups on account of gender, poverty, educational profile and other elements of social vulnerability are given equal vulnerability are given equal opportunity and possibility	The policy is triggered as the project shall be implemented within residential areas and is aimed at benefiting households in various Counties within the country. As such the people are directly affected and shall be involved in the entire project lifecycle	Yes	The standard is triggered as the project directly affect the people thus their consent and acceptance of the project and its components is essential. It will be necessary for sensitization of the potential customers on electrical safety, connection options, payment plans, and also to respond to the concerns about the project from the public. KPLC to carry out public sensitization forums and document proceedings. This shall enable the proponent to address concerns thus enabling smooth implementation of the project and forge a constructive relationship with relevant stakeholders

Operational Safeguard	Objective	Trigger for the Standards	STANDARD TRIGGERED	JUSTIFICATION
	to voice their opinions and ensure that these are accounted for the project decision making process (v) Duly verify and assess that the quality and process of engagement undertaken by third parties on the project conform to the provisions included in the present standard			
The Kenya Constitution 2010 gives power of self-governance to the people and enhance the participation of the people in the exercise of the powers of the state and in making decisions affecting them.				

b) European Investment Bank's Environmental and Social Standards triggered by AFD/EU/EIB Last Mile Connectivity Project

The likely locations for projects under this component of AFD/EU/EIB LMCP are not yet known, but will most definitely be undertaken in underserved counties of Kenya. Further preparatory work needs to be concluded as to the specific geographic reach of the proposed project (e.g. selection and location of infrastructure investment). Further details on the state/county and social/physical environment of the project activities will be provided in the later stage.

The activities in the AFD/EU/EIB LMCP are for the moment expected to trigger only EIB 08 (Labour Standards), EIB 09 (Occupational and Public Health, Safety and Security) and EIB 10 (Stakeholder Engagement). The standards instruments prepared for any subprojects will address the requirements of any applicable policies.

Table 4: EIB Standards triggered by AFD/EU/EIB LMCP

EIB STANDARDS TRIGGERED BY THE AFD/EU/EIB LMCP	YES	NO
EIB 01: Assessment and Management of Environmental and Social Impacts and Risks	X	
EIB 02: Pollution Prevention and Abatement	X	
EIB 03: Standards on Biodiversity and Ecosystems	X	
EIB 04: Climate Related Standards		X
EIB 05: Cultural Heritage	X	
EIB 06: Involuntary Resettlement	X	
EIB 07: Rights and Interests of Vulnerable Groups	X	
EIB 08: Labour Standards	X	
EIB 09: Occupational and Public Health, Safety and Security	X	
EIB 10: Stakeholder Engagement	X	

c) Environmental Assessment

This framework requires Environmental Assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision-making. The EA is a process whose breadth, depth, and type of analysis will depend on the nature, scale, and potential environmental impacts of the proposed investments under the AFD/EU/EIB Last Mile Connectivity Project.

The environmental process takes into account the natural environment (air, water, and land); human health and safety; social aspects and Trans-boundary and global environmental aspects.

This ESMF will be the guiding tool for the Contractors who will use it in Environmental Screening for each site then preparing individual specific Construction ESMPs for each lot. Such ESMPs will be reviewed by the Consultant and approved by KPLC.

d) Alignment of EIB and GOK Policies relevant to this ESMF

a) Both the European Investment Bank Environmental and Social Standards and GoK laws are generally aligned in principle and objective: Both require Environmental Assessment before project design and implementation (which also includes an assessment of social impacts).
b) Both require public disclosure of reports and stakeholder consultation during preparation.
c) While EIB 01 of European Investment Bank stipulates different scales of ESIA for different category of projects, Kenya's EMCA requires environmental screening to be undertaken for new projects. In the event that notable environmental impacts will occur as a consequence of the sub-project, then an EIA will be undertaken for those sub-projects. If there would only be minimal impacts for a sub-project, then the results of the environmental screening will be prepared and submitted to NEMA and the European Investment Bank.
d) Where EMCA requires Strategic Environmental Assessments, EIB 01 requires that an Environmental Assessment be conducted for projects with significant impacts on the host environment.
e) EMCA recognizes other sectorial laws while EIB has standards for specific interests.
f) The Bank requires that stakeholder consultations be undertaken during planning, implementation and operation phases of the project which is equivalent to the EMCA 1999 requirements. Additionally, statutory annual environmental audits are required under EMCA.

In Kenya, it is a mandatory requirement under EMCA 1999 for all development projects (Schedule Two) to be preceded by an EIA study. Thus, under the Laws of Kenya, environmental assessment is fully mainstreamed in all development process. All the Sub projects under the AFD/EU/EIB LMCP will not fall under schedule II of EMCA and thus may not require a full-scale EIA process. Further, in order to fully insure against triggers to EIB environmental and social standards, individual sites will be screened against each policy as part of the EIA project report requirements.

e) Requirements for Public Disclosure

This ESMF will be disclosed in line with the European Investment Bank requirements through posting on the Kenya Power's website www.kplc.co.ke. The final version will be publicly disclosed through the Bank's Information Centre.

4.6 Description of World Bank Operational Safeguard Policies

a) Introduction

The World Bank's environmental and social safeguard policies are a cornerstone of its support to sustainable poverty reduction. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. This ESMF has been designed so that all sub-projects that will be implemented under AFD/EU/EIB LMCP comply with the Operational Safeguard Policies of the World Bank and all the applicable environmental policies, laws and regulations of the Government of Kenya (GoK). The activities in the AFD/EU/EIB LMCP are expected to trigger the following policies;

Table 5: Operational safeguards triggered by AFD/EU/EIB LMCP

OPERATIONAL SAFEGUARDS TRIGGERED BY THE AFD/EU/EIB LMCP	YES	NO
OP/BP 4.01: Environmental Assessment	x	
OP/BP 4.04: Natural Habitats	x	
OP/BP 4.36: Forests	x	
OP/BP 4.09: Pesticide Management		x
OP/BP 4.11: Physical Cultural Resources	x	
OP/BP 4.10: Indigenous Peoples	x	
OP/BP 4.12: Involuntary Resettlement	x	
OP/BP 4.37: Safety of Dams		x
OP/BP 7.50: Projects in International Waters		x
OP/BP 7.60: Projects in Disputed Areas		x

b) Safeguard Policies relevant to AFD/EU/EIB LMCP

Environmental Assessment (OP/BP 4.01)

OP 4.01 provides for the use of an Environmental and Social Management Framework (ESMF) when a project consists of a series of subprojects, and the impacts cannot be determined until the sub-project details have been identified. The ESMFs examine the issues and associated impacts, sets out the principles, rules, guidelines and procedures to assess the environmental and social impacts during project implementation. It contains measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive impacts of sub-projects, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project impacts."

The objective of Environmental Assessment policy is to ensure that Bank-financed projects are environmentally sound and sustainable, and that decision making is improved through appropriate analysis of actions and their likely environmental Impacts assessment and Environmental Management Plan (EMP). This OP/BP 4.01 is triggered through the mandatory Environmental and Social Screening Process through which the project is assigned a Category based upon its potential environmental and social risks and impacts in its area of influence.

AFD/EU/EIB Last Mile Connectivity Project is proposed as a category B (Partial Assessment)- assigned to projects that are likely to have limited and reversible environmental impacts, that can readily be mitigated. There are no significant and /or irreversible adverse environmental issues anticipated from the project sub components to be financed under the Project. The ESMF includes methodology to apply an environmental and social screening process that will guide in determining the potential environmental and social impacts of subprojects and in the application of appropriate mitigation measures. Site-specific ESIAs, where necessary, will be prepared during implementation and before construction as may be required for the subprojects.

After screening as may be necessary, NEMA approval for sub-projects that shall require a full environmental assessment will be sought before commencement of detailed design to ensure that good practices are included in the technical design. The ESMF will serve as the environmental safeguards document in cases where a full environmental assessment is not deemed necessary based on the findings of the screening.

c) *Comparison with Kenya law*

OP/BP4.01 requirements are in tandem with Kenya Legislation. EMCA 1999 Section 57 A requires proponents for Plans, Programs and projects to carry out Strategic Environmental Assessment. Section 58 states that "Notwithstanding any approval, permit or license granted under this Act or any other law in force in Kenya, any person, being a proponent of a project, shall before financing, commencing, proceeding with, carrying out, executing or conducting or causing to be financed, commenced, proceeded with, carried out, executed or conducted by another person any undertaking specified in the Second Schedule to this Act, submit a project report to the Authority, in the prescribed form, giving the prescribed information and which shall be accompanied by the prescribed fee.

OP 4.04: Natural Habitats

The policy is triggered for LMCP-AFD for projects involving construction of distribution power lines.

Specific objective of the OP 4.04 includes but not limited to the following

- To preserve biological diversity by avoiding, or if not possible, reducing and minimizing impacts on biodiversity;
- In cases where some impacts are unavoidable, to endeavor to reinstate or restore biodiversity including, where required, the implementation of biodiversity offsets to achieve "not net loss but net gain" of biodiversity;
- To protect natural, modified and critical habitats; and
- To sustain the availability and productivity of priority ecosystem services to maintain benefits to the affected communities and to sustain project performance.

This policy recognizes that the conservation of natural habitats is essential to safeguard their unique biodiversity and to maintain environmental services and products for human society and for long-term sustainable development. The Bank therefore supports the protection, management, and restoration of natural habitats in its project financing, as well as policy dialogue and economic and sector work.

This policy is triggered by any project (including any sub-project under a sector investment or financial intermediary) with the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project). Further, it is triggered if a project is to be located in a habitat where there may be potential biodiversity impacts or in areas providing ecosystem services upon which potentially affected stakeholders are dependent for survival, sustenance, livelihood or primary income, or which are used for sustaining the project. It is also triggered if the project is designed to extract natural resources as a main purpose (e.g. plantation forestry, commercial harvesting, agriculture, livestock, fisheries and aquaculture).

The Bank supports, and expects borrowers to apply, precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development. Natural habitats are land and water areas where most of the original native plant and animal species are still present. Natural habitats comprise many types of terrestrial, freshwater, coastal, and marine ecosystems. These could be affected by clearing various natural habitats to create space for the substations and for the powerlines wayleave traces.

Due diligence will be carried to prevent routing of powerlines and siting of Substations in sensitive

ecological sites.

Comparison with Kenyan law

According to the Wildlife and conservation act "habitat" means a place or site where wildlife naturally occurs, and which provides food, cover and water on which wildlife depend directly or indirectly. Endangered ecosystem" means an ecosystem of exceptional biodiversity value or a habitat of endangered or endemic species which has undergone severe degradation. Threatened ecosystem" means an ecosystem of high biodiversity value or habitat of endangered or endemic species that is under threat of degradation.

The critical habits are accorded distinct attention through a special regulation namely (Wildlife Conservation and Management (Protection of Endangered and Threatened Ecosystems, Habitats and Species) Regulations, 2016. The purpose of these regulation is to implement the classification of ecosystems, habitats and species into the following categories

- Critically endangered;
- Endangered;
- Vulnerable;
- Protected; and
- Threatened.

It Provides for protection of ecosystems that are threatened or endangered to maintain their ecological integrity; provide for the protection of species that are threatened, endangered, vulnerable, or protected to ensure their survival in the wild; implement Kenya's obligations under international agreements regulating international trade in endangered species; and ensure sustainable management and utilization of biodiversity.

Section 51 (e) of EMCA prohibits and controls the introduction of alien species into natural habitats. Section 54 of EMCA 1999, The Cabinet Secretary may, in consultation with the relevant lead agencies and in accordance with the Constitution, the Convention on Biological Diversity and other treaties, by notice in the *Gazette*, declare any area of land, sea, lake, forests or river to be a protected natural environment for the purpose of promoting and preserving specific ecological processes, natural environment systems, natural beauty or species of indigenous wildlife or the preservation of biological diversity in general

OP/BP 4.36 Forests

In the context of forests, the Operational Policy on Forests (OP 4.36) is proactive in both identifying and protecting critical forest conservation areas and in supporting improved forest management in production forests outside these areas. The will not finance activities in
forests or with huge forest footprint or that could potentially affect forest resources or their management.

Comparison of policy with Kenya law
This Act provides for the development and sustainable management, including conservation and rational utilization of all forest resources for the socioeconomic development of the country and for connected purposes.

The FCM Act, 2016 guarantees the long-term public benefits provided by forests. Generally, the Act requires the rehabilitation, maintenance, and protection of forestlands for the benefit of all by ensuring sustainable exploitation, utilization, management and conservation of the environment and natural resources while working to achieve and maintain a tree cover of at least ten per cent of the land area of Kenya and as such, every person has a duty to protect and conserve our forests. OP/BP 4.36 Help harness the potential of forests and protect vital environmental services and values of forests. It also supports improved forest management just like Forestry conservation and management act.

Section 43 subsection 1 provides that if mining, quarrying or any other activity carried out in the forest, shall, where activity concerned is likely to result in forest cover depletion, the person responsible shall undertake compulsory re-vegetation immediately upon the completion of the activity.

OP/BP 4.10: Indigenous People

This policy is geared towards ensuring that the development process fully respects the dignity, human rights, economies and cultures of the indigenous people.

The objective of this policy is to;

(i) ensure that the development process fosters full respect for the dignity, human rights, and cultural uniqueness of indigenous peoples;

(ii) ensure that adverse effects during the development process are avoided, or if not feasible, ensure that these are minimized, mitigated or compensated; and

ensure that indigenous peoples receive culturally appropriate and gender and inter- generationally inclusive social and economic benefits.

This may be triggered if the projects are implemented in areas with vulnerable and marginalized groups. In this project are not foreseeing the policy being triggered.

Comparison of policy with Kenya law

The Kenya Constitution 2010 Section 56 on Minorities and Marginalized groups states that "The State shall put in place affirmative action programmes designed to ensure that minorities and marginalised groups--

(a) participate and are represented in governance and other spheres of life; (b) are provided special opportunities in educational and economic fields; (c) are provided special opportunities for access to employment; (d) develop their cultural values, languages and practices; and (e) have reasonable access to water, health services and infrastructure.

In Kenya, the people who meet the OP 4.10 criteria or fit the definition of articles 260 of the constitution of Kenya, 2010 are referred to as vulnerable and marginalized Groups (VMG) instead of indigenous peoples. The reference does not take away the spirit and intention of the policy.

OP 4.11: Physical Cultural Resource

This policy addresses physical cultural resources, which are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community. Physical cultural resources are important as sources of valuable scientific and historical information, the policy is triggered as a precaution, although the sub-projects are not expected to traverse areas of cultural or historical importance.

The implementing agency will address the impacts on physical cultural resources in AFD/EU/EIB LMCP as an integral part of the Environmental Assessment (EA) process. This will begin at screening during EIA to identify presence of cultural property. The borrower will develop a physical cultural resources management plan that includes measures for avoiding or mitigating any adverse impacts on physical cultural resources, provisions for managing chance finds, any necessary measures for strengthening institutional capacity, and a monitoring system to track the progress of these activities.

The national law (National museums and Heritage Act 2006) requires that Where a person discovers a monument or object of archaeological or paleontological interest, the person shall, within seven days, give notice thereof, indicating the precise site and circumstances of the discovery, to the National Museums, and in the case of an object, shall deliver the object to the National Museums or to the District Commissioner to keep it for any particular purpose or for any particular period. Subject to section 27, no person shall move a monument 'Or object of archaeological or paleontological interest from the place

where it has been discovered otherwise than in such manner and to such p1ace as may be allowed by an, exploration license, or by written permit from the Minister after consultation with the National Museums."

OP 4.12: Involuntary Resettlement

The objective of this policy is to

(i) avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs;
(ii) design and implement resettlement as a sustainable development program
(iii) assist displaced persons in improving their former living standards, income earning capacity, and production levels, or at least in restoring them;
(iv) pay for lost assets at replacement cost
(v) encourage community participation in planning and implementing resettlement; and

aid affected people regardless of the legality of land tenure.

This policy covers not only physical relocation, but any loss of land or other assets resulting in:

- Relocation or loss of shelter;
- loss of assets or access to assets;
- Loss of income sources or means of livelihood, whether the affected people must move to another location.

This policy also applies to the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.

The AFD/EU/EIB LMCP project does not envisage triggering of this policy since no involuntary resettlement will be effected in the course of the project.

Comparison with Kenya law

According to the Land Act 2012, If land is acquired compulsorily, just compensation shall be paid promptly in full to all persons whose interests in the land have been determined. This is different from OP 4.12 which states that compensation shall be at replacement cost. In this case the policy will be used during compensation since its more specific.

The way leaves Act cap 292 states that the Government may carry any works through, over or under any land whatsoever provided it shall not interfere with any existing building or structures of an ongoing activity. Where any developments are affected, the Act recommends for compensation. Section 6 (1), "the Government shall make good all compensation to the owner of any tree or crops destroyed or damaged". The word good compensation is ambiguous and the principles of OP 4.12 will prevail on compensation.

Table 6: Comparative Analysis of World Bank OP 4.12 and Government of Kenya requirements including measures to address gaps

OP 4.12	Kenyan Legislation	Comparison	Recommendation to Address Gap
GENERAL REQUIREMENTS			
World bank OP4.12 has overall policy objectives, requiring that: 1. Involuntary resettlement should be avoided wherever possible, or minimized, exploring all alternatives. 2. Resettlement programs should be sustainable, include meaningful consultation with affected parties, and provide benefits to the affected parties. 3. Displaced persons should be assisted in improving livelihoods etc., or at least restoring them to previous levels.	1. According to Kenyan Legislation, involuntary resettlement may occur as a result of projects implemented in public interest. 2. The Land Act, 2012 Act outlines procedures for sensitizing the affected population to the project and for consultation on implications and grievance procedures. 3. The Land Act 2012 guarantees the right to fair and just compensation in case of relocation.	1. The Law does not stipulate that resettlement should be avoided wherever possible; on the contrary, as long as a project is for public interest, involuntary resettlement is considered to be inevitable. 2. Same as the World Bank 3. Just and fair compensation as outlined in the Land Act 2012 is not clear and can only be determined by NLC, which can be subjective. It is does not talk about improving livelihood or restoring them to pre-project status.	I. For each of the subproject, ensure that resettlement issues are considered at the design stage of the project in order to avoid/ minimize resettlement. - Implement World Bank OP 4.12 policy - displaced should be assisted in improving their livelihood to pre-project status.

OP 4.12	**Kenyan Legislation**	**Comparison**	**Recommendation to Address Gap**
PROCESS REQUIREMENTS			
Consultation: Displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs	The Land Act outlines procedures for consultation with affected population by the NLC and grievance management procedures.	Same as World Bank	Implement consultation procedures as outlined in both Kenyan legislation and World Bank.
Grievance: For physical resettlement, appropriate and accessible grievance mechanism will be established.	Land Act 2012 clearly outline the steps and process for grievance redress that includes alternative dispute resolution, re-negotiation with NLC and is backed by the judicial system through Environmental and Land Court.	Kenyan legislation meets OP4.12 requirements.	N/A
Eligibility Criteria *Defined as:* (a) those who have formal legal rights to land (including customary and traditional rights recognized under the laws of the country); (b) those who do not have formal legal rights to land	The Land Act 2012 provides that written and unwritten official or customary land right are recognized as valid land right. The Law provides that people eligible for compensation are those holding land tenure rights Land Act also recognizes those	Kenya's Land Law defines eligibility as both formal (legal) and informal (customary) owners of expropriated land. However, it does not specifically recognize all users of the land to be compensated.	Ensure ALL users (including illegal squatters, labourers, rights of access) of affected lands are included in the census survey and are paid for loss of assets other than land.

OP 4.12	Kenyan Legislation	Comparison	Recommendation to Address Gap
at the time the census begins but have a claim to such land or assets—provided that such claims are recognized under the laws of the country or become recognized through a process identified in the resettlement plan (see Annex 10 A, para. 7(f)); and19 (c) those who have no recognizable legal right or claim to the land they are occupying *To determine eligibility:* Carry out resettlement census. Cut-off date for eligibility is the day when the census begins.	who have interest or some claim in the land such pastoralist or who use the land for their livelihood. The constitution recognizes 'occupants of land even if they do not have titles' and payment made in good faith to those occupants of land. However, this does not include those who illegally acquired land Land Act 2012 provides for census through NLC inspection and valuation process	The constitution of Kenya on the other hand recognizes 'occupants of land' who do not have title and who the state has an obligation to pay in good faith when compulsory acquisition is made. Same as World Bank	Implement cut-off procedures as outlined in the Kenyan Law
Measures: Preference should be given to land based resettlement strategies for displaced persons whose livelihoods are land-based. Cash based compensation should only be made where (a) land taken for the	Legislation provides for land for land compensation, but the Land Act 2012 does not state whether preference should be granted to land for land compensation. Land Act 2012 appears to prefer mode of	Land for Land provided for in the Land Act but act not specific on when it should have applied except when the affected person choses to receive land to land award. Cash based compensation seems to be the	Ensure that all alternative options are considered in preference to providing cash compensation (as outlined in the Entitlement Matrix). Use World Bank OP4.12 procedures

OP 4.12	Kenyan Legislation	Comparison	Recommendation to Address Gap
project is a small fraction of the affected asset and the residual is economically viable; (b) active markets for lost assets exist and there is sufficient supply of land and housing; or (c) livelihoods are not land-based.	compensation by the Government to the affected population. Land Act 2012 call for just compensation	preferred mode of awarding compensation to the affected population by Government of Kenya	in determining form of compensation Implement prompt and effective compensation at full replacement cost for the losses of the assets.
World Bank OP4.12 Article 6(a) requires that displaced persons are provided with prompt and effective compensation at full replacement cost for losses of assets attributable directly to the project. If physical relocation is an impact, displaced persons must be provided with assistance during relocation and residential housing, housing sites and/or agricultural sites to at least equivalent standards as the previous site. Replacement cost does not take depreciation into account. In terms of valuing assets, if the residual of the asset being taken is not economically	Land Act talks of prompt, just and full compensation before the acquisition of land. However, interpretation of just compensation is yet to be clearly outlined through a specific schedule defining just and fair compensation has not been put in place. Attorney's fees, cost of obtaining advice or cost incurred in preparing and making written claim not included in just compensation	Just compensation as stipulated in the Land Act not yet specifically defined. Land Act very clear on attorney fees that it is not included. OP 4.12 includes those cost as part of full replacement	Implement World Bank policy on Attorney's fees. Ensure that ALL resettlement options are agreed on with PAPs and

OP 4.12	Kenyan Legislation	Comparison	Recommendation to Address Gap
viable, compensation and assistance must be provided as if the entire asset had been taken. Compensation and other assistance required for relocation should be determined prior to displacement, and preparation and provision of resettlement sites with adequate facilities, where required	The Act is does not out rightly stipulate assistance for relocation, but we can interpret that relocation cost will be included in just compensation.	OP4.12 requires that displacement must not occur before all necessary measures for resettlement are in place, i.e., measures over and above simple compensation	put in place BEFORE displacement of affected persons.
Valuation: With regard to land and structures, "replacement cost" is defined as follows: For agricultural land, it is the pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected	Valuation is covered by the Land Act 2012 and stipulates, as already mentioned, that the affected person receive fair and just compensation from NLC, as determined by National Land Commission. Valuers Act stipulates that a residual amount of 0.5% of the total valuation of an asset is expected to pay the valuer. Land Act 2012 talks of fair and just compensation for the lost assets but it is not specific of the exact amount or	Though one could argue that there is some form of consistency between the Kenyan Law and World Bank OP.4.12, interpretation of 'just and fair compensation has not been defined. Interpretation of just and fair compensation not clear	Apply the World Bank OP4.12 valuation measures, as outlined in Section 6, in order to fully value all affected assets in a consistent manner. Apply World Bank OP4.12 on valuation and compensation measures.

OP 4.12	Kenyan Legislation	Comparison	Recommendation to Address Gap
land, plus the cost of any registration and transfer taxes. For houses and other structures, it is the market cost of the materials to build a replacement structure with an area and quality similar to or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labour and contractors' fees, plus the cost of any registration and transfer taxes.	procedures on the same. The Land Act 2012 stipulates just and fair compensation.	Interpretation of just and fair compensation not clear.	Apply World Bank OP4.12 on valuation and compensation procedures.
Monitor Adequate monitoring and evaluation of activities to be undertaken.	According to Land Act can be undertaken County Land Boards.	Both Kenyan Law and World Bank policy advocates for Monitoring and Evaluation	Implement as prescribed in the World Bank OP4.12 and Kenyan Law.

Alignment of WB and GOK Policies relevant to this ESMF

a. Both the World Bank safeguards policies and GoK laws are generally aligned in principle and objective: Both require Environmental Assessment before project design and implementation (which also includes an assessment of social impacts).
b. Both require public disclosure of ESIA reports and stakeholder consultation during preparation.
c. While OP 4.01 of World Bank stipulates different scales of ESIA for different category of projects, Kenya's EMCA requires environmental screening to be undertaken for new projects. In the event that notable environmental impacts will occur as a consequence of the sub- project, then an EIA will be undertaken for those sub-projects. If there would only be minimal impacts for a sub-project, then the results of the environmental screening will be prepared and submitted to NEMA and the World Bank.
d. Where EMCA requires Strategic Environmental Assessments for policy, programs and plans and OP 4.01 requires that Strategic Environmental Assessment be conducted, the complexity and nature of which depends on the project category.
e. EMCA recognizes other sectoral laws while WB has safeguards for specific interests.
f. The Bank requires that stakeholder consultations be undertaken during planning, implementation and operation phases of the project which is equivalent to the EMCA 1999 requirements. Additionally, statutory annual environmental audits are required under EMCA.
g. Compensation in respect of public right of way (land Act 2012) notes that compensation shall be payable to any person for the use of land, of which the person is in lawful or actual occupation, as a communal right of way and, with respect to a wayleave, in addition to any compensation for the use of land for any damage suffered in respect of trees crops and buildings as shall, in cases of private land, be based on the value of the land as determined by a qualified valuer.
h. Land Act 2012 talks of prompt, just and fair compensation before the acquisition of land. However, interpretation of just compensation is yet to be clearly outlined through a specific schedule defining just and fair compensation.
i. The constitution of Kenya recognizes 'occupants of land even if they do not have titles' and payment made in good faith to those occupants of land. However, this does not include those who illegally acquired land
j. Public participation and consultation are clearly outlined in the constitution and EMCA and so no much difference with the World Bank policies

In Kenya, it is a mandatory requirement under EMCA 1999 for all development projects (Schedule Two) to be preceded by an EIA study. Thus, under the Laws of Kenya, environmental assessment is fully mainstreamed in all development processes consistent with World Bank safeguard policies on EA. All the Sub projects under the AFD/EU/EIB LMCP are not likely to fall under schedule II of EMCA and thus may not require a full-scale EIA process. Further, in order to fully insure against triggers to WB safeguard policies, individual sites will be screened against each policy as part of the EIA project report requirements.

World Bank policies	Kenya law	Comparison/gaps	Filling the gaps
O.P 4.01Environmental Assessment Requires environmental assessment (EA) of projects to help ensure that they are environmentally sound and sustainable, and thus to improve decision making	EMCA notes that No proponent shall implement a project for which an environmental impact assessment is required under the Act or these Regulations, unless an environmental impact assessment has been concluded and approved	Similar	N/A
OP 4.04 Natural habitat supports the protection, maintenance, and rehabilitation of natural habitats and their functions.	The law gives guidance on habitats and special treatment is given to endangered and threatened species through a special regulation	Similar	N/A
O.P 4.36 Forests: the policy is proactive in both identifying and protecting critical forest conservation areas and in supporting improved forest management in production forests outside these areas. It mainly harnesses the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development, and protect the vital local and global environmental services and values of forests.	Forestry Conservation and Management Act 2016 the Act requires the rehabilitation, maintenance, and protection of forestlands for the benefit of all by ensuring sustainable exploitation, utilization, management and conservation of the environment and natural resources while working to achieve and maintain a tree cover of at least ten per cent of the land area of Kenya	Similar	N/A
OP 4.10 Indigenous people ensures that the development process fully respects the dignity, human rights, economies, and cultures of Indigenous Peoples	the people who meet the OP 4.10 criteria are referred to as vulnerable and marginalized Groups (VMG) instead of indigenous peoples.	Kenyan does not mention indigenous people.	The reference in national law does not take away the spirit and intention of the policy Kenyan law is more inclusive of other vulnerable populations
O.P 4.11 Physical Cultural Property defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that	National museums and heritage Act; to provide for the establishment, control, management and development of national museums and the identification,	Similar	N/A

have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance.	protection, conservation and transmission of the cultural and natural heritage of Kenya;		
O.P 4.12 Involuntary resettlement. States that compensation shall be at replacement cost.	Land Act 2012, If land is acquired compulsorily, just compensation shall be paid promptly in full to all persons whose interests in the land have been determined.	Issues of compensation are more elaborate in the policy	The O.P 4.12 objectives will guide resettlement

5 CHAPTER FIVE: BASELINE INFORMATION

This section describes the overall baseline condition of Kenya in terms of bio-physical environment, as well as the socio-economic and cultural. The proposed project will be rolled out in almost the entire country within the 32 counties hence the baseline information presented below will give reflection for the entire country.

5.1 Location and Size

Kenya (***Figure 1***) is located in the eastern part of the African continent approximately between latitudes $4^0$21' N and 4° 28' S and between longitudes 34° and 42° E. Kenya is bordered by Uganda to the west, Ethiopia and South Sudan to the north, Tanzania to the south and Somalia and the Indian Ocean to the east. Kenya covers an area of approx. 587,000 km2, of which 11,000 km^2 consists of water bodies.

Kenya's landscape is grouped into geographical zones including; the Savannah Lands covering most of the arid and semi- arid areas, the Coastal Margin, the Rift Valley, the Highlands and the Lake Victoria Basin.

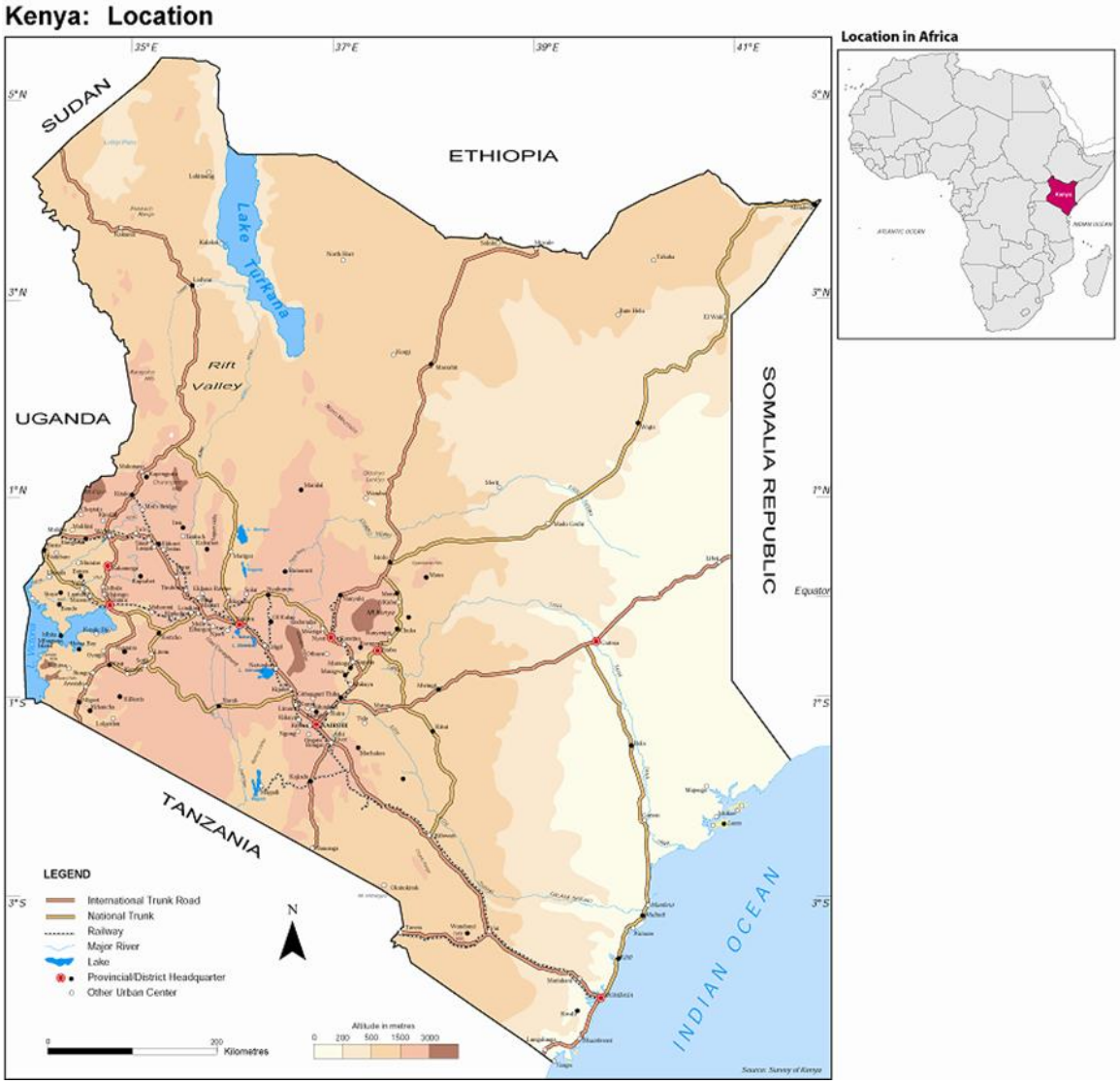

Figure 1: Map of Kenya

Kenya sits on the Equator in East Africa. It is bordered by the Indian Ocean to the east, Somalia and Ethiopia to the north, South Sudan to the Northwest, Tanzania to the South, and in the West, by Uganda.

Kenya is Africa's tenth most populated country and ranks 22nd in terms of its size (Source: Survey of Kenya 2003)

Kenya lies along the equator in East Africa. Most of the country consists of high plateau areas and mountain ranges that rise up to 3,000 m and more. The plateau area is dissected by the Eastern Rift Valley, which is 40-50 km wide and up to 1,000 m lower than the flanking plateau.

The narrow coastal strip along the Indian Ocean is backed by a zone of thorn bush-land. Some areas in central Kenya, at the flanks of the Rift Valley, and in western Kenya, close to Lake Victoria, are very densely populated.

The land stretches from the sea level (Indian Ocean) in the east through a diversity of landforms. From the coast, the altitude changes gradually through the coastal belt and plains (below 152 Metres above sea level), the dry intermediate low belt to what is known as the Kenya Highlands (over 900 Metres above sea level). The country is split by the Great Rift Valley into the Western part, which slopes into Lake Victoria from the Mau ranges and Mount Elgon (4,300m) and the Eastern part dominated by Mt. Kenya and the Aberdare Ranges which rise to 5,200m and 4,000m respectively.

5.2 Physical Environment

a) Climate

Kenya enjoys a tropical climate. It is hot and humid at the coast, temperate inland and very dry in the north and northeast parts of the country. The average annual temperature for the coastal town of Mombasa (altitude 17 Metres) is 30.3^0 Celsius maximum and 22.4^0 Celsius minimum, the capital city, Nairobi (altitude 1,661 Metres) 25.20 Celsius maximum and 13.60 Celsius minimum, Eldoret (altitude 3,085) 23.6^0 Celsius maximum and 9.5^0 Celsius minimum, Lodwar (altitude) 506 Metres) and the drier north plain lands 34.8^0 Celsius maximum and 23.7^0 Celsius minimum.

The long rains occur from April to June and short rains from October to December. The rainfall is sometimes heavy and when it does come it often falls in the afternoons and evenings. The hottest period is from February to March and coldest in July to August.

b) Topography and Drainage

The Republic of Kenya has an area of approximately 582,646 sq. km. comprising of 97.8% land and 2.2% water surface. Only 20% of the land area can be classified as medium to high potential agricultural land and the rest of the land is mainly arid or semiarid. Forests, woodlands and national reserves and game parks account for ten percent (10%) of the land area, i.e. 58,264 sq. km. 18.

Kenya's total land surface comprises of 13,396 km^2 of water surface. This water surface comprise of a number of small lakes with fluctuating limits as well as part of Lake Victoria and most of Lake Turkana. Only 3,831 km^2 of Lake Victoria is in Kenya while most of Lake Turkana lies in Kenya. Kenya's coastal line extends approximately 402 km along the Indian Ocean.

Topographically, the country may be divided into 4 distinct geographical and ecological regions or zones with different patterns of land use, namely; the coastal plain, the arid low plateau, the highlands, and the

Lake Victoria basin. The rainfall patterns are extremely varied but generally follow those regions, with the Lake Victoria basin receiving the heaviest and most consistent rainfall.

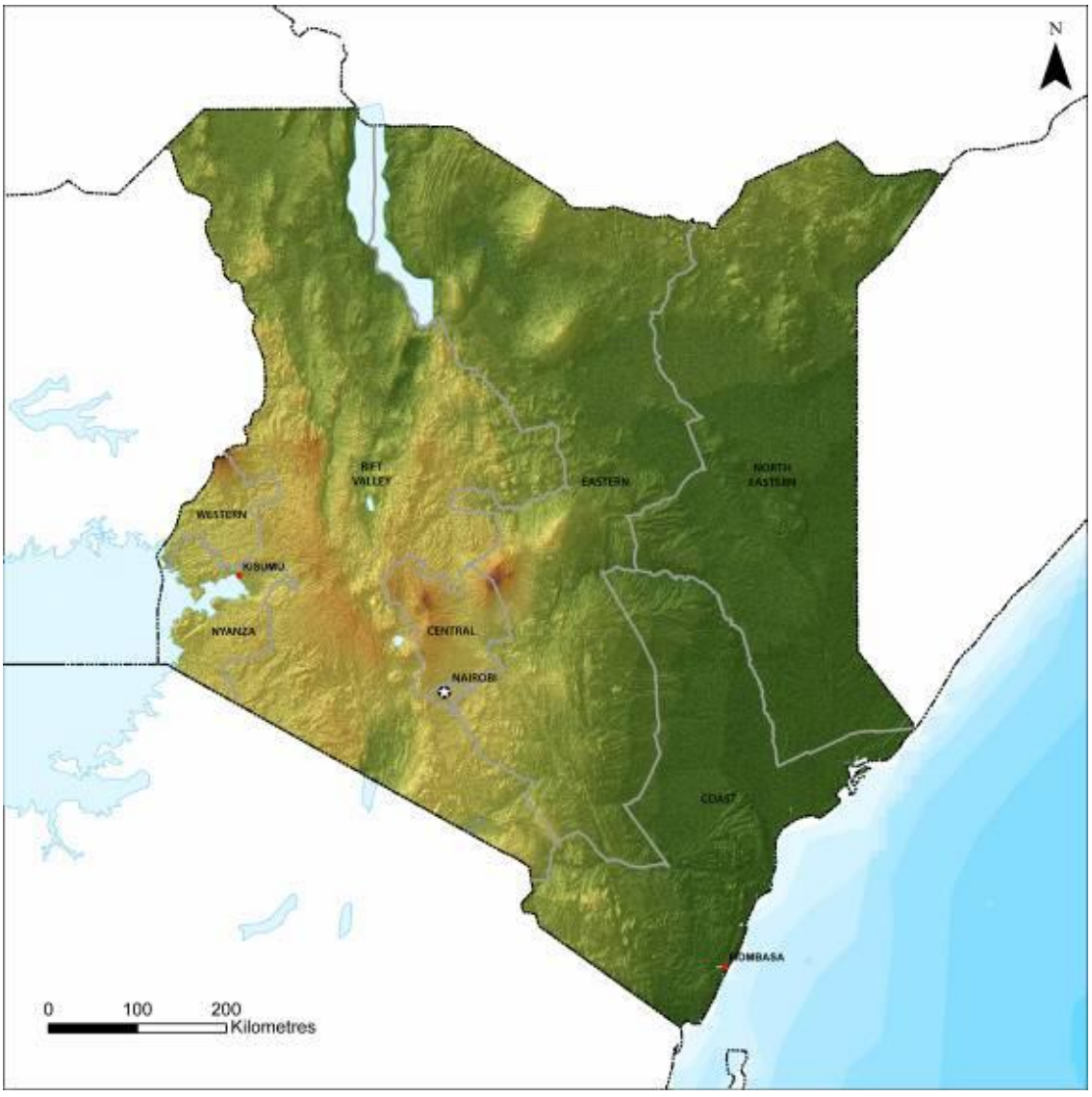

Figure 1: Relief Map of Kenya

Kenya's relief can be roughly divided into six major regions: the lowlands of the coastal belt and plains; the Buruma Waiir Low land belt; the Foreland Plateau; the Highlands (East and West); the Nyanza Low Plateau (part of the Lake Victoria Basin);and the Northern Plain lands(Survey of Kenya 2003).

A small percentage of the water surface area is covered by surface drainage. This drainage is determined primarily by the Rift Valley, which roughly bisects the highland zone from North to South. Within the Rift Valley, drainage is into a chain of lakes, which have no surface outlet west of the Rift Valley rivers drain into Lake Victoria. To the East, rivers follow a southeasterly course into the Indian Ocean.

In some areas, topography and rainfall - runoff regime have created many semi-closed, poorly drained or overflow areas that retain a substantial amount of runoff which originate on the sloped areas. On groundwater, the country is divided into three broad areas. These are volcanic rocks, Precambrian metamorphic basement rocks and Precambrian intrusive rocks and sedimentary rocks.

The volcanic rocks cover 26% of the country, more commonly in the western half of Kenya.

Groundwater sources occur in old land surfaces, which are weathered zones between successive lava flows that signify periods of quiescence. Fractures, faults, fissures and joints are also useful.

Water is mainly of bicarbonate type with low total dissolved solids. Local pockets of high fluoride are believed to be of volcanic and fumarolic origin.

The Precambrian rocks cover an area which is approximately 17% of the country and are widely distributed in the central, western and north western parts of Kenya. Water in these areas occurs in deep horizons of faults, and fractures. Aquifers are generally unconfined and yields and water levels vary within rocks. The sedimentary rocks cover 55% of the country, predominantly in the eastern parts. These areas have loose and permeable sediments. The aquifers are shallow and unconfined and most of them are generally saline. The salinity results from accumulation ofsolute evaporite minerals within the sediments.

c) Hydrology

Kenya’s four largest inland water bodies (Lake Victoria, Lake Turkana, Lake Naivasha, and Lake Baringo) account for about 1.9 per cent of the land area. The majority of Kenya’s lakes, including both saline and freshwater, and closed and open basin systems, are located within the Great East African Rift Valley. Kenya’s major permanent rivers originate in the highlands. The Nzoia, Yala, Sondu Miriu, and Migori rivers drain into Lake Victoria. The Ewaso Ngiro River is found in the northeastern part of the country and the Tana and Athi rivers flow in the southeastern part. The rivers draining into Lake Victoria (covering over 8 per cent of Kenya’s land area) provide about 65 per cent of Kenya’s internal renewable surface water supply. The Athi River drainage area (11per cent of Kenya’s land area) provides 7 per cent, the lowest share among Kenya’s major drainage areas (Survey of Kenya 2008 and MOWI.).

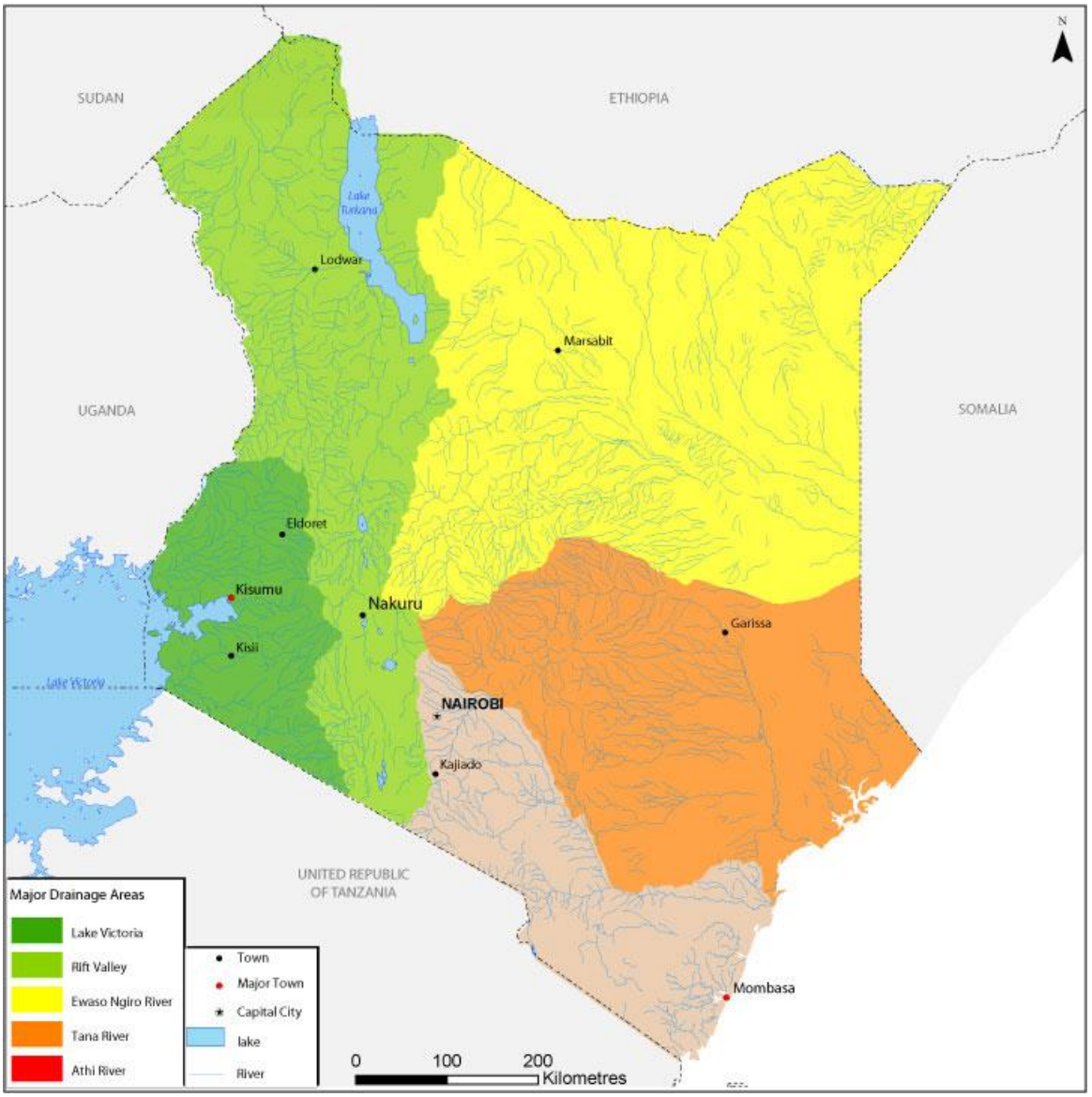

Figure 2: hydrological Map of Kenya

d) Soils and Geology

The geology of Kenya is characterized by Archean granite/greenstone terrain in western Kenya along Lake Victoria, the Neoproterozoic 'Pan-African' Mozambique Belt, which underlies the central part of the country and Mesozoic to Recent sediments underlying the eastern coastal areas.
The Eastern Rift Valley crosses Kenya from north to south and the volcanics associated with rift formation largely obliterate the generally north-south striking Neoproterozoic Mozambique Belt (Schlueter 1997). Rift Valley volcanogenic sediments and lacustrine and alluvial sediments cover large parts of the Eastern Rift.

About 59 per cent of Kenya's soils have moderate to high fertility, meaning they are theoretically suitable for growing crops. Fertility levels, however, depend on the amount of rainfall. Given the distribution and variability of rainfall in Kenya, only about 17 per cent of the land area has medium to high potential for crops, while the remaining 83 per cent is classified as arid and semi-arid and so of low crop growing potential (Survey of Kenya 2003). Dry lands, however, provide essential habitat for about half the country's livestock and 70 per cent of Kenya's wildlife (UNCCD 2002).

e) Land Use

Approximately seventy-five per cent (75%) of the country's population lives within the medium to high potential (20% of land area) and the rest in the vast Arid and Semi-Arid Lands (ASALs). One consequence of this is that size and distribution of land varies quite widely as does population density which ranges from as low as 2 persons per sq. km. in the ASALs to a high of over 2000 in high potential areas.

5.3 Biological Environment-Ecosystems

Kenya's land is covered by different types of vegetation according to the climate, topography, and other physical factors. The major categories are grassland, forests, semi-deserts, and mountains. Human impacts on the land continue to alter the distribution, amount, and health of these ecosystems (Survey of Kenya 2003).

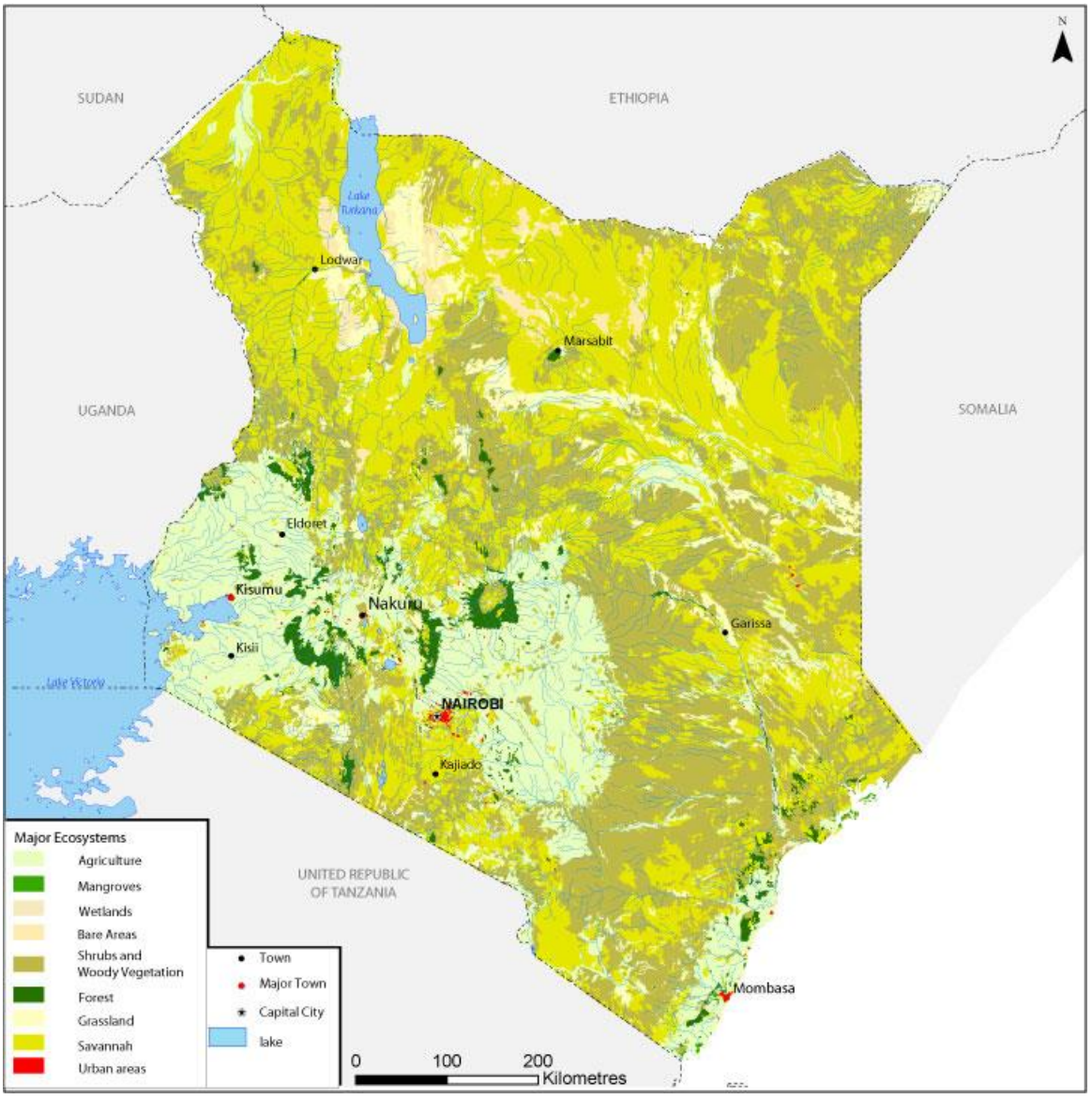

Figure 3: Major ecosystems in Kenya

a) Grasslands

Grasslands dominate Kenya's land cover and include what is known as 'savanna' vegetation. Permanent meadows and pastures occupy about 21.3 million ha. in Kenya, which represent 2.4per cent of Africa's total meadows and pastures (FAO 2008).

b) Forests

Forests cover 2.9 per cent of Kenya's land area (KFMP 1995). The main forest types are moist highland forest, dry forest, tropical rain forest, coastal forest, and riverine and mangrove forests (Survey of Kenya 2003). Although they are not extensive land cover, Kenya's forests provide significant goods and services, including numerous non-timber forest products that provide local people with food, fibres, medicines, and shelter. The closed canopy forests are habitat for a disproportionately large percentage of the country's wildlife and other biodiversity. It is estimated that they harbor 40 per cent of large mammals, 30 per cent of birds and 35 per cent of the nation's butterflies. About half of Kenya's threatened mammals and birds are found in its forests (Survey of Kenya 2003).

c) Arid and semi-arid lands (ASALS)

Over 80 per cent of Kenya is arid or semi-arid lands (ASAL). These lands are home to over 10million people. The ASAL has over 70 per cent of the livestock population and 90 per cent of the wild game, which attract tourism to the area. The ASAL also contains much of Kenya's commercial mineral wealth (WRI et al. 2007 and MSDNKAL 2008).

d) Mountain vegetation

Kenya's five major mountainous regions (Mount Kenya, Mount Elgon, Aberdare Range, Mau Escarpment, and Cherangani Hills) are surrounded by foothills and high-elevation plateaus. Mountainous regions harbour unique types of vegetation due to the micro-climates that occur on their slopes. Different altitudes, aspects, and moisture availability create a large variety of ecosystems over relatively small areas.

e) Wetlands

Kenya's wetlands occur in both fresh and salt waters. They include coral reefs, mangroves, deltas, creeks, lake shores, rivers, marshes, ponds, impoundments, and mountain bogs. They are a source of water, provide numerous ecosystem services, and have a high diversity of characteristic biota or living organisms (Ramsar Convention 2001).

Kenya's wetlands cover about 14 000 km2 (2-3 per cent of the country's surface area) and are found along the major rivers. In addition, many seasonal and temporary wetlands occur all over the country, including rock pools and springs in the southern part of Nairobi, west of Ngong Hills, and at Limuru. Wetlands have also been created by damming water for hydroelectricity and water supplies, and some wetlands have been built to treat wastewater (Macharia 2004).

Wetlands are a source of social-cultural and economic potential providing people with food, medicinal products, firewood, and materials for building and handicrafts. Rapid population growth, agricultural operations, and encroachment of development pose a serious threat to wetlands. Expanding industries and

urban centers discharge their waste water into them and the polluted waters are unhealthy for human and livestock use, destroy aquatic life, and restrict recreation opportunities (Ramsar Convention 2001).

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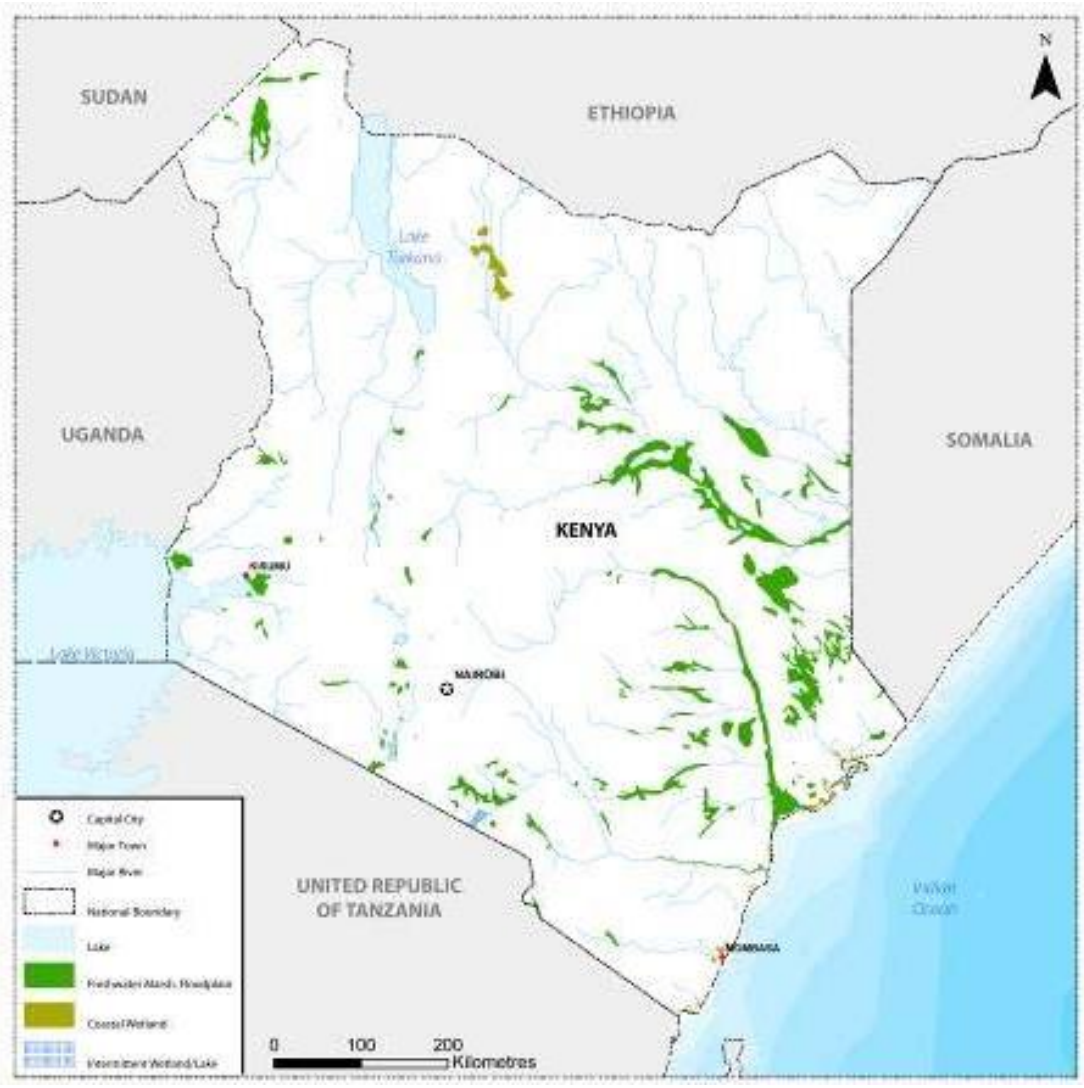


Figure 4: Kenya's Largest Wetlands

They include the shallow lakes Nakuru, Naivasha, Magadi, Kanyaboli, Jipe, Chala, Elmentaita, Baringo, Ol'Bolossat, Amboseli and Kamnarok; the edges of Lake Victoria and Lorian, Saiwa, Yala, Shompole swamps; Lotigipi swamp(Lotagipi) and Kano plains; Kisii valley bottoms and Tana Delta; and coastal wetlands (Source: WWF 2005)

f) Marine and coastal areas

Kenya’s marine and coastal environments include the Indian Ocean’s territorial waters and the immediate areas that border the ocean. The Kenyan coast stretches 550 kilometers from the Somalian border in the north in a south-westerly direction to the border with Tanzania. The fringing coral reef (comprised of about 140 species of hard and soft corals) runs between 0.5.kmand 2km off-shore with occasional gaps at the mouths of rivers and isolated areas facing creeks.

Beaches, cliffs, or mangrove forests dominate the shoreline in most areas. The coral-reef system, mangrove swamps, and hinterland provide unique natural landscapes and a wide range of biodiversity resources of special conservation concern.

g) **Wildlife**

Kenya's game parks and spectacular wildlife attract nearly two million tourists each year (UN Water2006) and generate important domestic revenues. Wildlife conservation is thus a high priority. Formed in 1946, Nairobi National Park, just outside the city, was the country’s first protected area. By 2008, about 75 237.9 km2 (WCPA 2007) of the nation’s land area had been set aside as national parks and game reserves.

Wildlife is also protected by bans on game hunting, killing animals even when they attack, and the trade in ivory and skins. Nevertheless, poaching is a significant threat to many species including leopards, cheetahs, lions, elephants, and rhinoceroses. Efforts are being made to restore populations of the endangered African elephant and black rhino, and an aggressive campaign is being been waged against poachers. Moreover, increased pressure on marine resources has led the Kenyan government to establish a system of protected areas managed by the Kenya Wildlife Service (KWS) to conserve and manage the most important ecosystems along the coast. In total, Kenya has five Marine Protected Areas (MPA's).

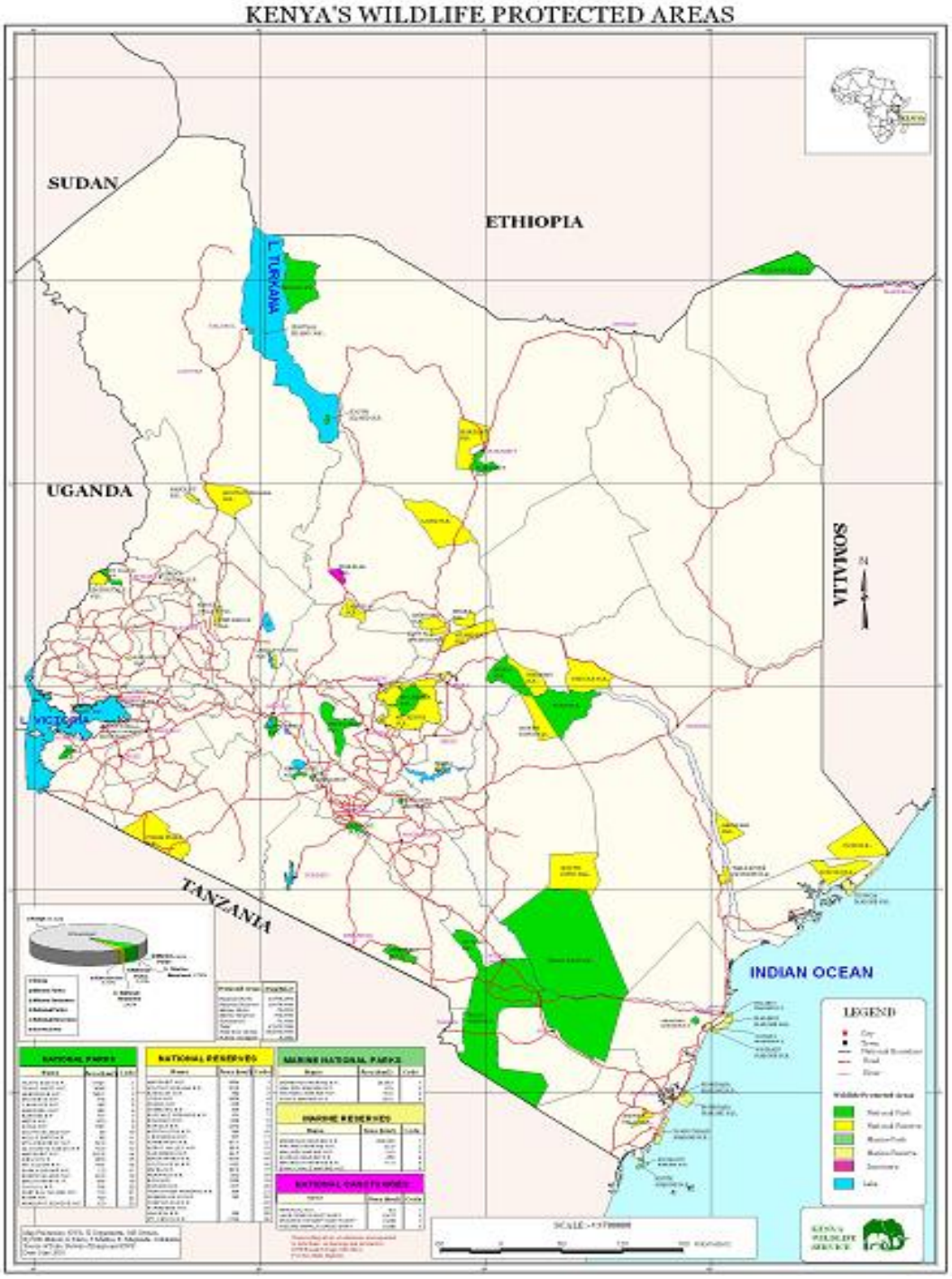


Figure 5: Protected Areas in Kenya

Examples of endangered species include the Sokokescops owl (Otusireneae); Taita blue-banded papilio (Papiliodesmonditeita); the highly endangered Tana River mangabey (Cercocebusgaleritus) and the Tana River red colobus (Piliocolobusrufomitratus); the green sea turtle (Cheloniamydas) and the critically endangered hawksbill turtle (Eretmochelysimbricata).

In addition to threats to species biodiversity, a number of types of ecosystems are disappearing or are in dangerous decline due to human activities. These include the slopes of Mount Kenya and coastal forests as well as the Horn of Africa Acacia Savannas, a major centre of endemism for dry land plants.

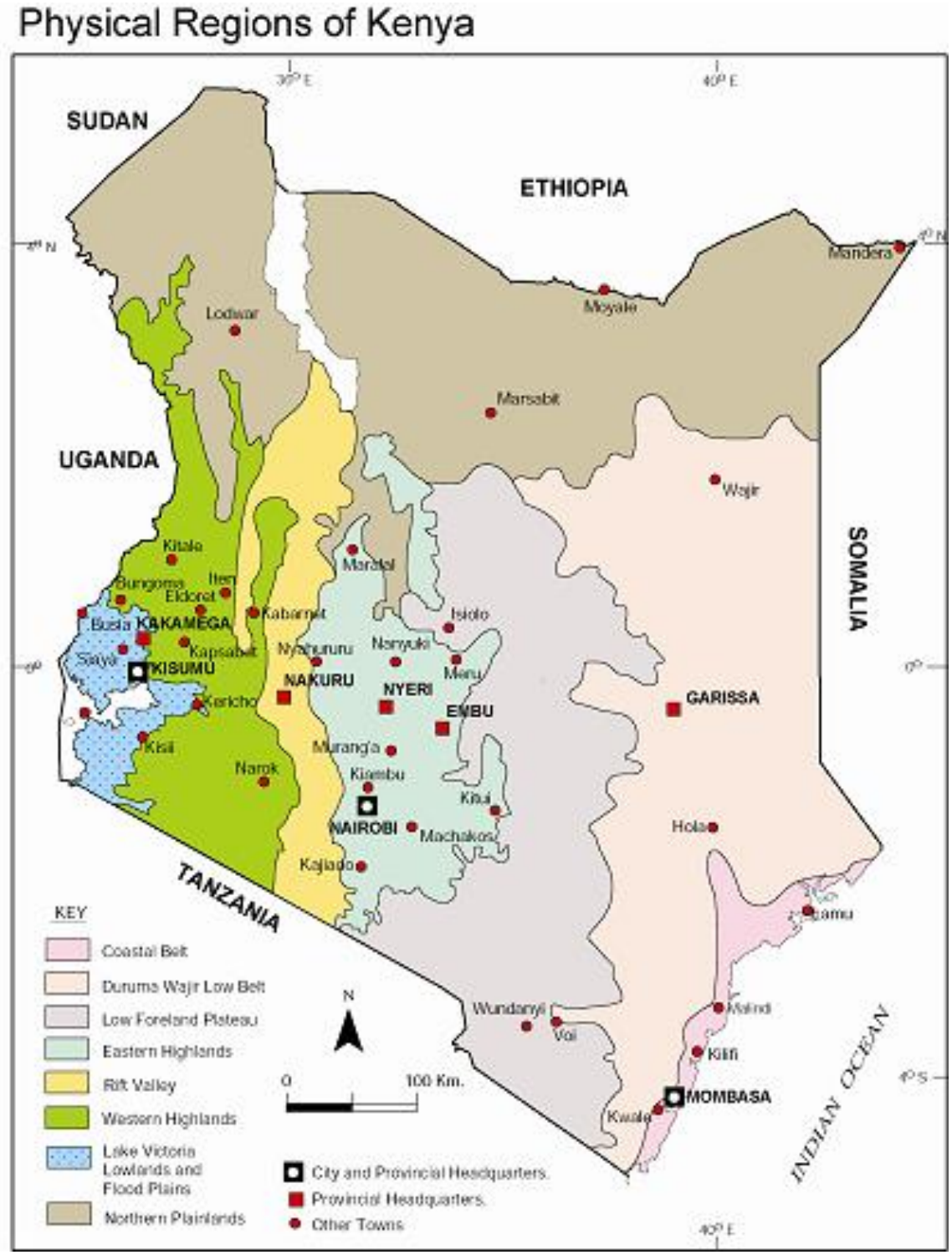


Figure 6: Physical Regions of Kenya

5.4 Socio-Economic Background

a) Population

Kenya's population increases by an estimated one million a year. The government revised population based on the 2009 census is 39.8 million, an increase of over 35 percent in the past decade. The population report shows the distribution of the population across the country, with Rift Valley Province being the most populous with 10.1 million people. Nairobi, the capital, has 3.1 million people, according to the report released by the Ministry of Planning and National Development. Demographic trends show that more people are moving to urban areas and the Bank estimates that half of Kenya's population will live in cities by 2050. Better macro-economic conditions in the past decade helped improve the welfare of Kenyans, but the poor remain vulnerability to drought and other crises induced by climate change. Rural and urban poverty remain a challenge. Recent analysis of the data from the 2005 to 2006 Kenya Integrated Household Budget Survey (KIHBS) indicates that national absolute poverty declined from 52.3 percent in 1997 to 46.1 percent in 2005 to 2006. While this decline in poverty compares well with other Sub Saharan African countries, it can still be considered high in comparison to neighboring countries such as Tanzania (about 36 percent) and Uganda (about 31 percent). In rural areas, overall poverty declined from 52.9 percent to 49.1 percent, while in urban areas, poverty declined from 49.2 percent in 1997 to 38.8 percent over the same period.

The Kenyan poverty profile also reveals strong regional disparities in the distribution of poverty. According to the 2005 to 2006 survey, the lowest incidence of rural poverty was in Central province (30.3 percent), followed by Nyanza (47.9 percent), Rift Valley (49.7 percent), Eastern (51.1 percent), Western (53.2 percent), Coast (69.7 percent), and North Easter province (74.0 percent). Inequality in Kenya remains high. The distribution of income, measured by the Gini coefficient (a measure of inequality of income distribution—the higher the percentage the higher the level of inequality) was estimated at 39 percent in rural areas and 49 percent for urban areas (pre-crisis). Income disparities in the rural areas have gone down since 1997, while the disparities in the urban areas have increased slightly. The Commission on Revenue Allocation is using the development and poverty data to develop a model for more equitable distribution of public resources.

There has been additional progress with respect to other dimensions of social development over the past years. For example, net primary education enrolment was only 80 percent in 2003, but has since increased to about 90 percent in 2008 (with an equal enrolment ratio between boys and girls). In 2004, only about 60 percent of primary students completed their education compared with about 80 percent in 2008. The transition from primary to secondary and later to tertiary and university education has also improved in recent years due to increased public and private investment in the education sector.

b) Economic Growth & Setting

Kenya's economy recorded high growth rates of real Gross Domestic Product (GDP) averaging 6.6% per annum during the immediate post-independence years (1964-1973) and towards the end of that decade. Deceleration of this growth which started in late 1970s, continued until 2002 when the economy registered a record negative growth rate of 0.2%. During the years 1997-2002 economic growth declined steadily with GDP recording an average annual growth rate of only 0.9%, against a population growth rate of 2.9% per annum. The economy has been on a recovery path since 2003 when real GDP grew by only 0.5% to

6.1 % in 2007, giving rise to an annual growth rate of about 4.3% against a population growth rate of about 2.8% per annum.

Among the key factors contributing to the economic decline were poor infrastructure, particularly bad roads, inadequate energy supply, inadequate water supply, a weak institutional framework, weak performance of the major sectors of the economy namely; agricultural and manufacturing sectors, and poor macro-economic management. More recently, about 46.6 % of Kenya's population of 35.5 million people in 2005/061 was estimated to be living below the country's poverty line in both rural and urban areas.

Despite a number of economic challenges, Kenya will still experience a satisfactory growth rate of 4.3 percent in 2011. This will be higher than Kenya's long-term growth rate of 3.7 percent but still a full percentage point below the average projected for Sub-Sahara Africa. In the first half of 2011, the Kenyan economy grew by 4.5 percent, driven by a strong performance in the financial sector (8.2 percent), construction (8.1 percent), as well as hotels and restaurants (6.4 percent). Moderate growth was recorded in the agricultural and industrial sectors. Overall growth for 2011 is expected to be balanced across all key sectors, with the services sector maintaining its position as the growth engine over the last decade

Agriculture has performed average despite the moderate drought. Agriculture production grew by 3.5 percent in the second first half of the year as rains normalized, especially in Kenya's "bread basket", the Rift Valley, and production held up again. The drought mostly affected Kenya's livestock production in Northern and Eastern regions. It is estimated that the drought shaved off 0.2 percentage points from GDP growth, mainly as a result of livestock mortality. Beyond these arid regions, low rainfall and high temperatures affected tea production. In addition, the crises in North Africa and Europe adversely affected the demand for Kenya's cash crops, mainly horticulture, coffee and tea.

Industrial sector growth remains driven by construction while manufacturing is lagging. The construction sub-sector recorded an impressive 8.1 percent growth in the first half compared to a 2.2 percent growth in the same period in 2010. Manufacturing grew at a modest 3.2 percent, compared to 5.5 percent in the same period last year. The drought impacted hydro power generation and the resulting high cost of energy has adversely affected the industrial sector. The share of hydro power in Kenya's energy supply declined from 57 percent in July 2010, to 43 percent in July 2011. This in turn increased dependence on back-up thermal power generation, which uses expensive imported fuel as its feedstock. Industries that depend on imported raw materials, saw their production costs increase significantly due to high import costs (oil and steel), along with the depreciation of the shilling.

The costs of imported machinery and equipment also increased substantially. The combined effect of these factors has negatively impacted the competitiveness of industry, resulting in a sluggish performance in 2011.

The services sector is holding up, fuelled by continued growth in ICT and a strong performance in tourism. Services grew by 4.3 percent in the first half of 2011, mainly driven by financial intermediation (8.2 percent); hotels and restaurants (6.4 percent), and transport and communication (5.2 percent). Tourist arrivals increased by 13.6 percent in the first half of 2011, compared to 2010 levels. Despite Europe's economic slowdown, 46 percent of arrivals were still from Europe, 25 percent from the rest of Africa, 12 percent from the Americas, and 10 percent from Asia. However, the emerging security concerns stemming from Kenya's incursion in Somalia will dampen tourist arrivals for the remainder of the year, though the high season is over.

The ICT revolution is reaching new milestones and is stimulating growth in other services. The mobile phone revolution has continued, with subscriptions peaking at 25.3 Million at the end of June 2011, which is more than the number of adults in Kenya. Since June 2010, subscriptions increased by more than 25 percent. In the same period, internet users increased by 60 percent, climbing to 12.5 Million.

This indicates that the data revolution is now also in full swing. A key factor in the growth of internet usage is the new affordable tools, including smart phones and social networking applications with both internet and mobile interface that are proving increasingly popular, especially among the urban youth. The sector has also generated additional innovations, including M-banking, linking mobile money with personal bank accounts, M-credit, and M-insurance, which are expanding the reach of financial services to previously unbanked segments of the population

5.5 SENSITIVE ECOSYSTEMS IN AFD/EU/EIB LMCP PROJECT

The following tables outline the sensitive ecosystems across the 32 counties as per AFD/EU Lotting for information and guidance. The guideline is that these sensitive eco-systems shall be avoided during implementation of the project. In the vent there is need to cross them the line route shall be designed along existing roads so as not to cut trees and not destroy wetlands. For river crossings, with riparian forests, a technical solution should allow not to cut down trees. EIB will implement LMCP across the same counties as per the lotting under EIB Scope of work as outlined in 2.3 (Geographic and work scope).
Due to the nature of the projects (MV /LV lines), the impacts on these sensisitive ecosystems shall be limited or nill. The potential impacts, if any, will be hilghlighted:

- At highlevel: after site identification (document to be included in the contract…)
- More precisely: after screening and lot ESMP

SENSITIVE ECOSYSTEMS IN AFD/EU LOT 1

No.	County	Land Types/Sensitive Ecosystems
1.	Nandi	King'wal Swamp (fig. 1) River Kesses River Mokong
2.	Uasin Gishu	Planted and natural forest covers i.e. Nabkoi, Timborowa, Sangalo, Lorenge, Kipkurere and Kapsaret (fig. 2 & 3)
		River Moiben and its 3 tributaries River Sosiani with its 3 tributaries River Sergoit with 2 tributaries River Kipkarren with 9 tributaries River Nzoia (fig. 4, 5, 6 & 7)
3.	Trans Nzoia	Cherengany Hills catchment Mt Elgon Catchment (fig. 8 & 9)
		River Nzoia and River Suam (fig. 7 & 10)
4.	Bungoma	River Sio and Lwakhakha-Malaba-Malakisi River (fig. 11 & 12)
5.	West Pokot	River Suam (fig. 10) River Weiwei River Kerio and River Muruny
		Cherengany Hills to the southern side (fig. 8)

Fig. 1 - KING'WAL SWAMP IN NANDI COUNTY

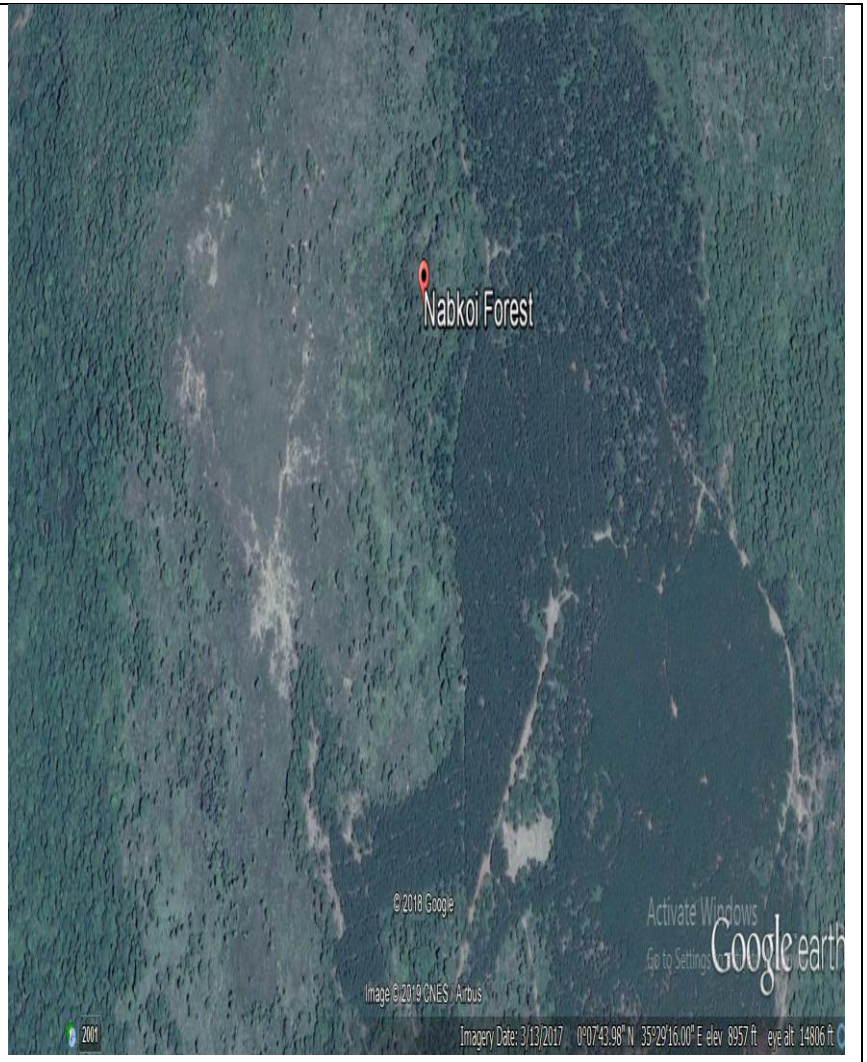


Fig. 2 - NABKOI FOREST IN UASIN GISHU COUNTY

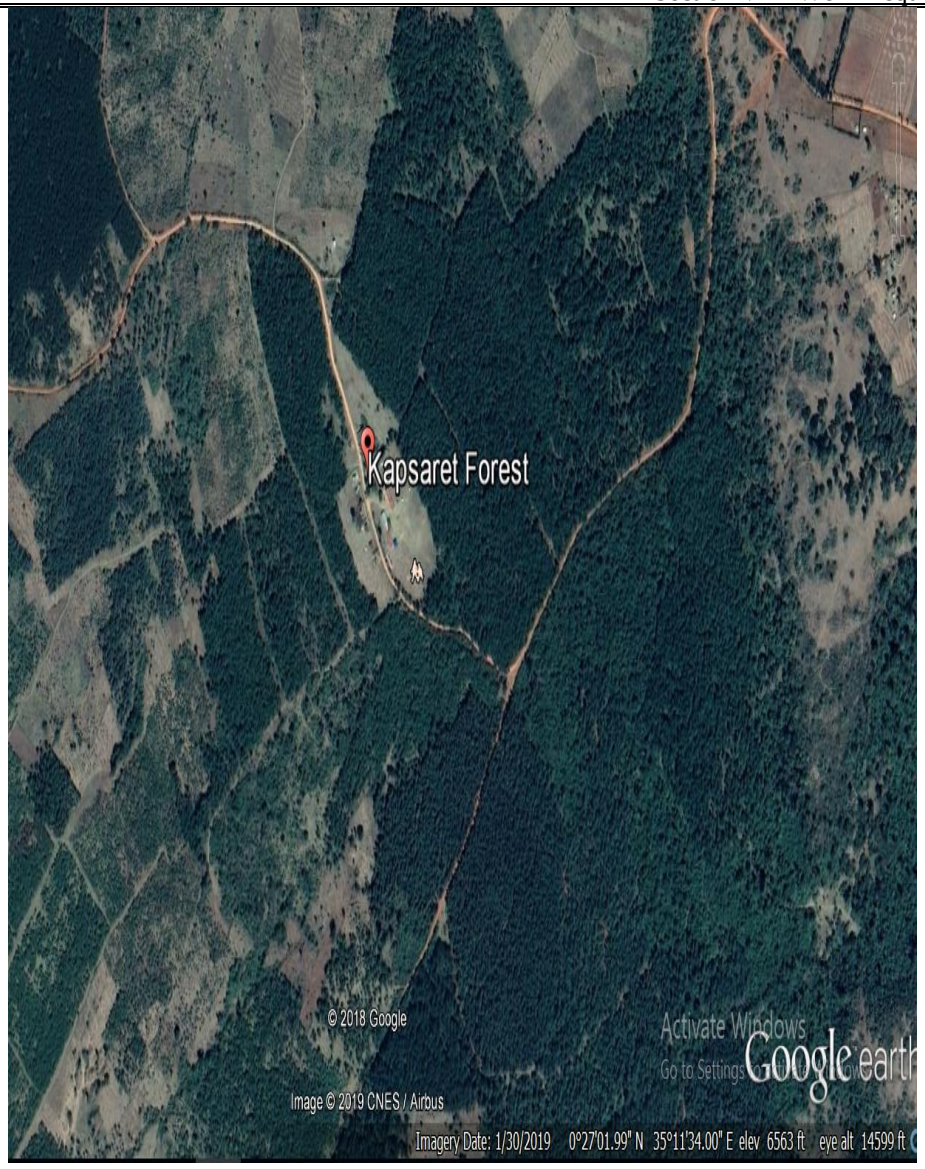


Fig. 3 - KAPSARET FOREST IN UASIN GISHU

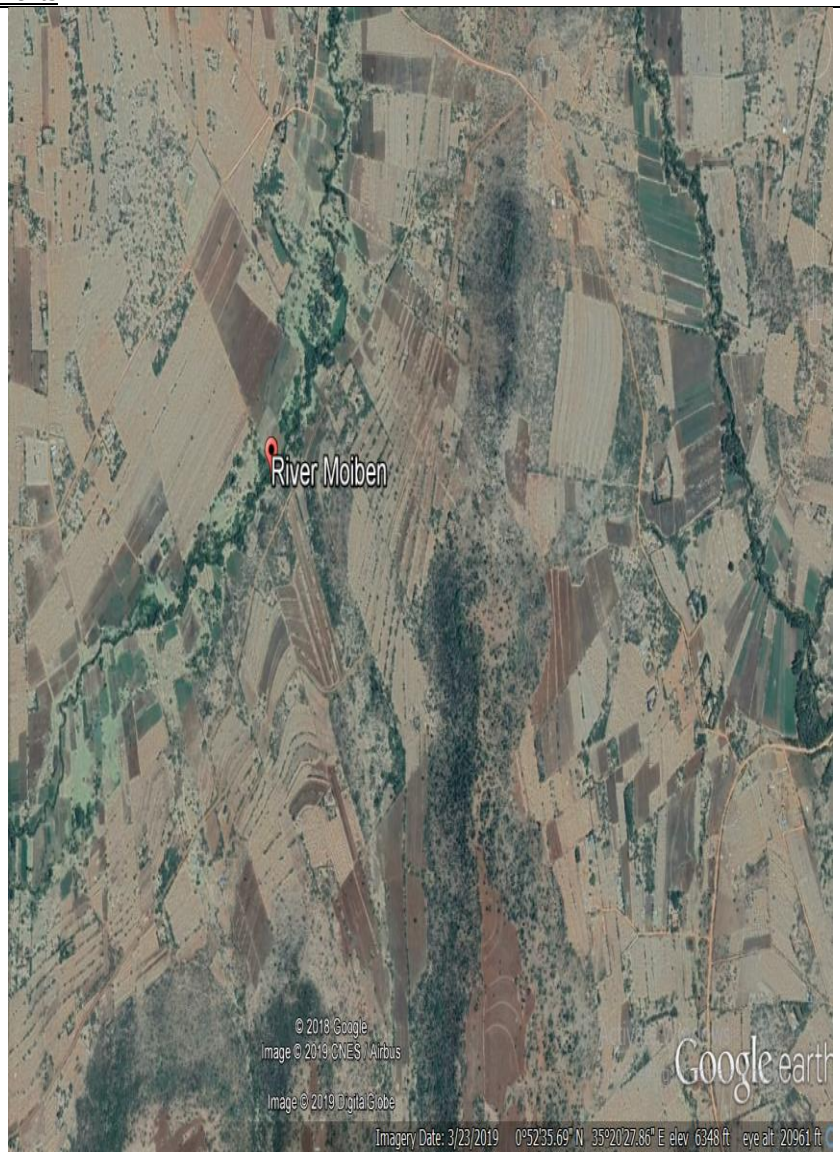


Fig. 4 - RIVER MOIBEN IN UASIN GISHU

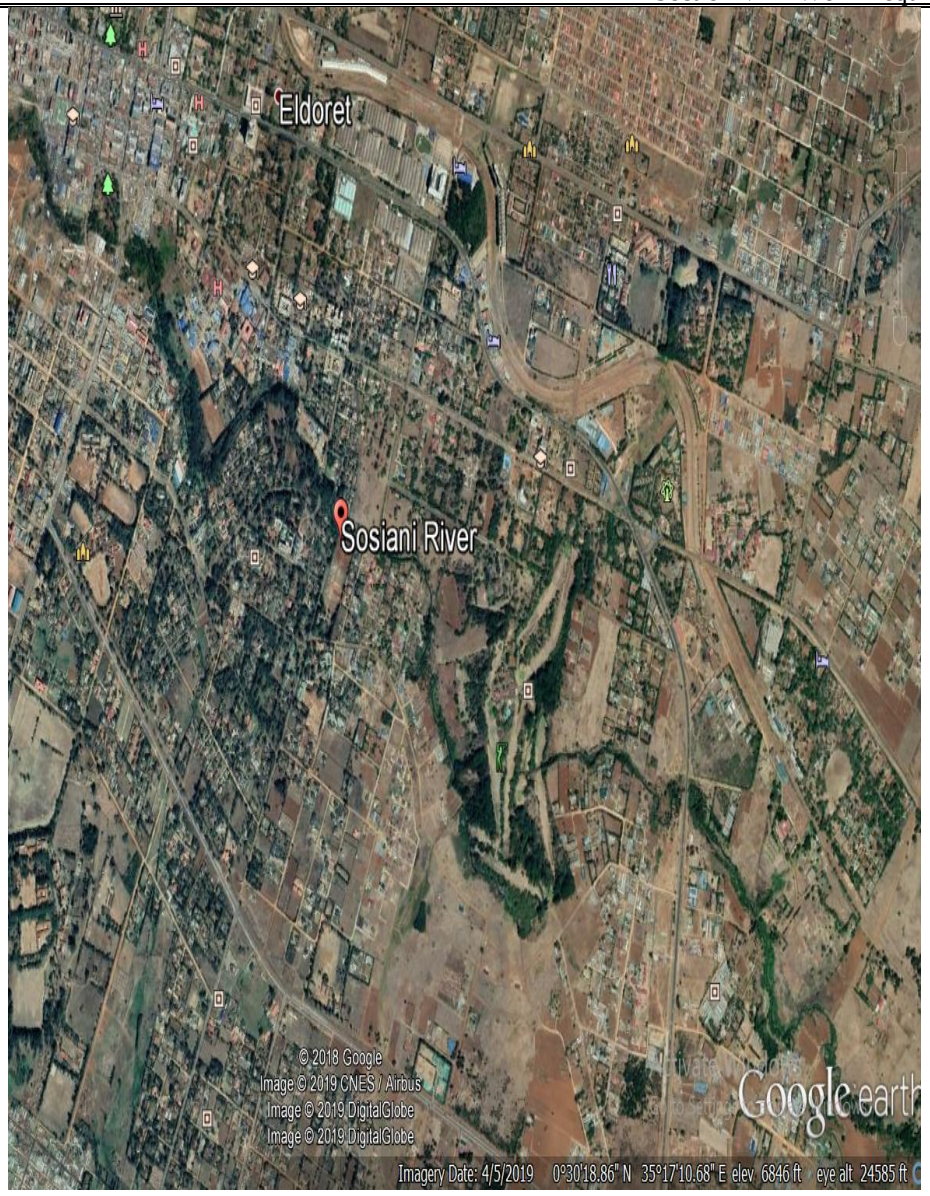


Fig. 5 - RIVER SOSIANI IN UASIN GISHU

Fig. 6 - RIVER KIPKAREN IN UASIN GISHU

Fig. 7 - RIVER NZOIA IN UASIN GISHU AND TRANS NZOIA

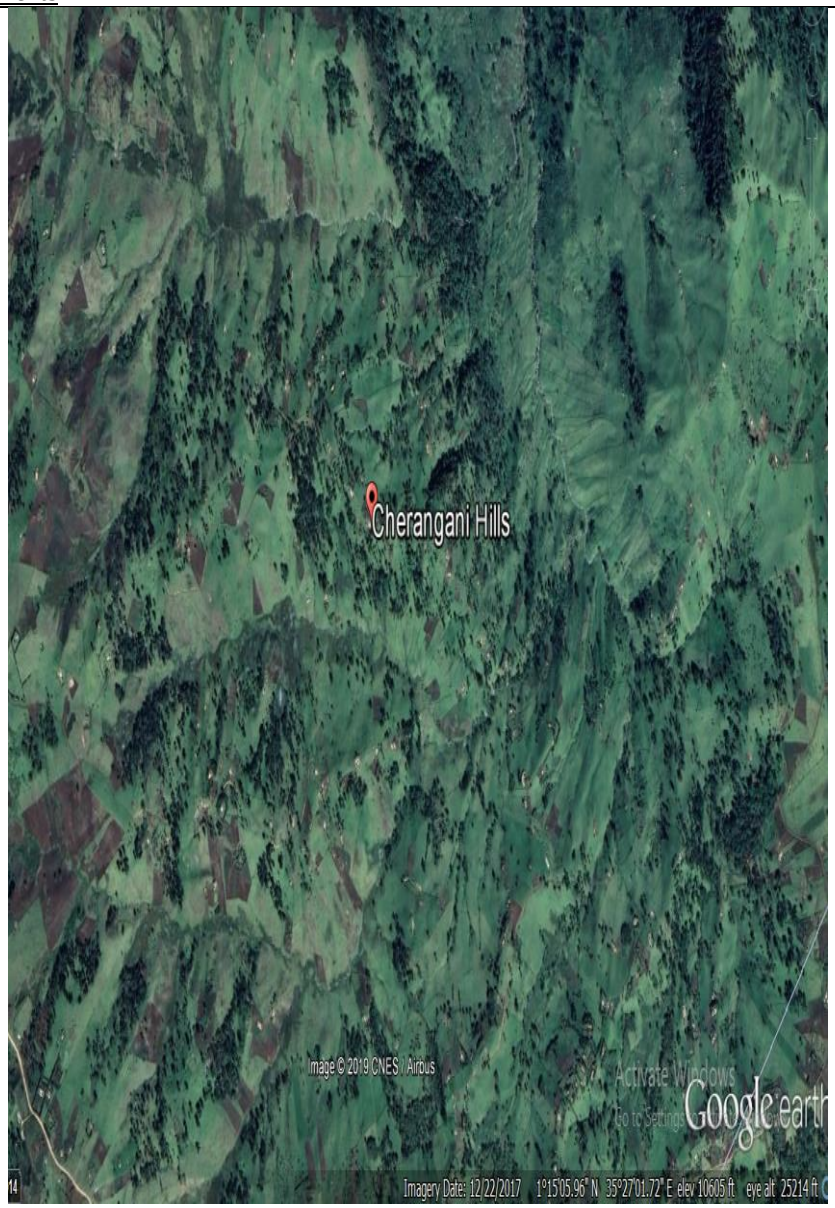


Fig. 8 - CHERANGANY HILLS IN TRANS NZOIA

Fig. 9 - MT ELGON CATCHMENT IN TRANS NZOIA

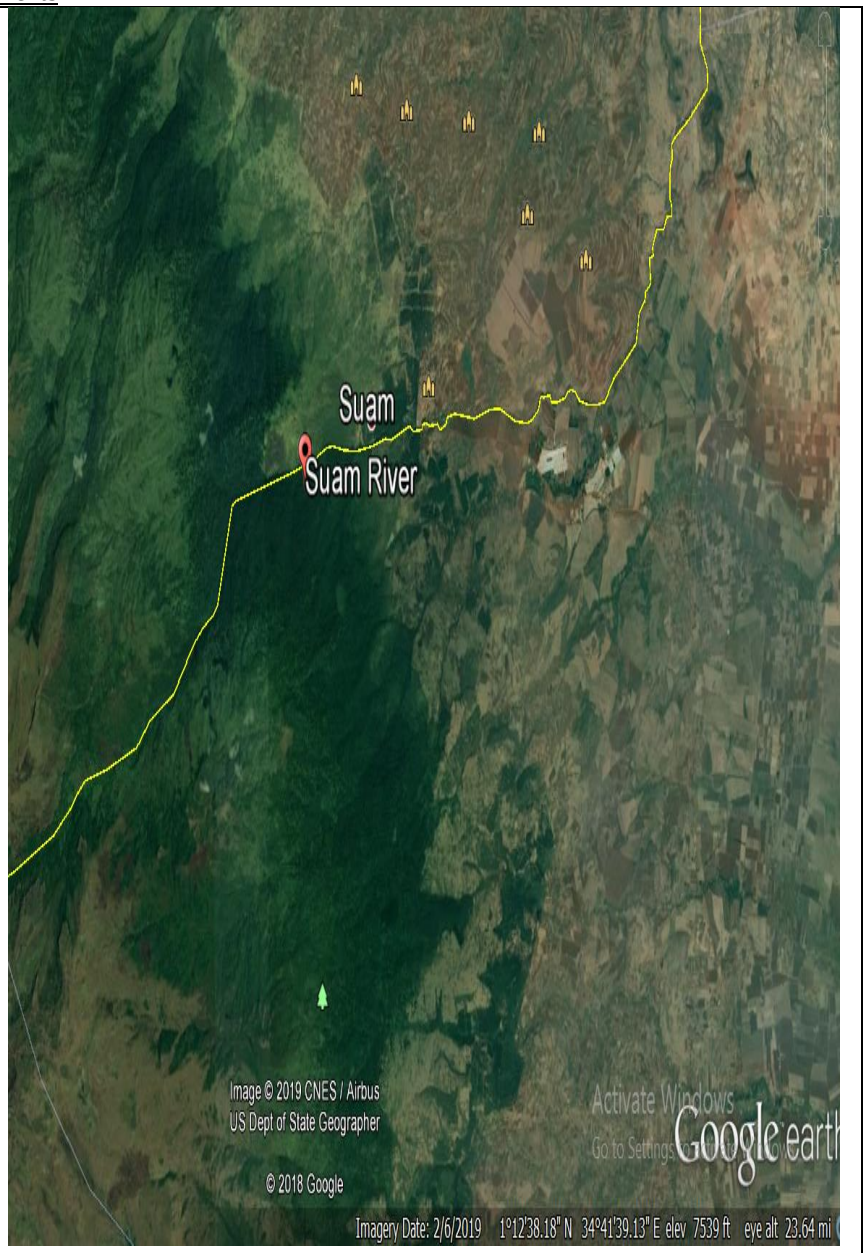


Fig. 10 - RIVER SUAM IN TRANS NZOIA

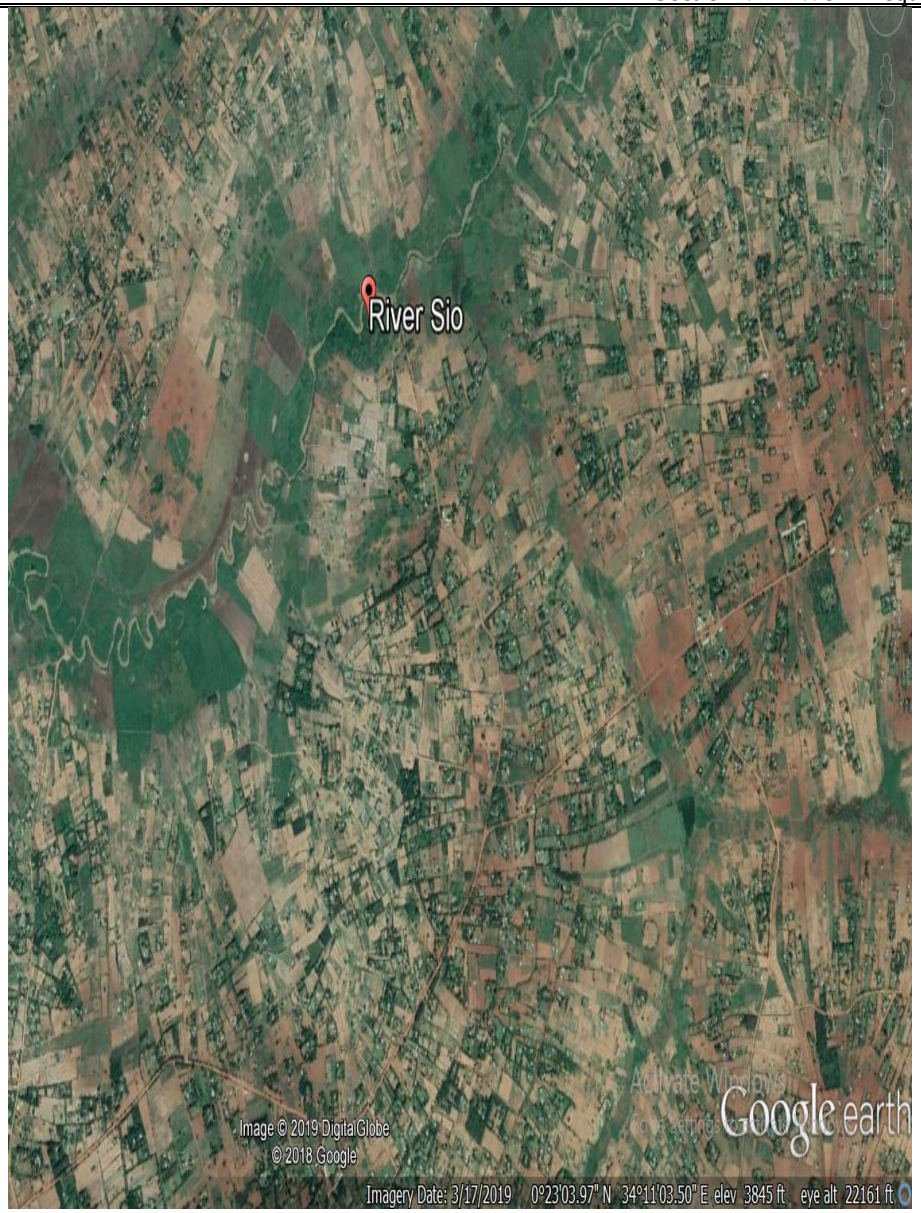


Fig. 11 - RIVER SIO IN BUNGOMA

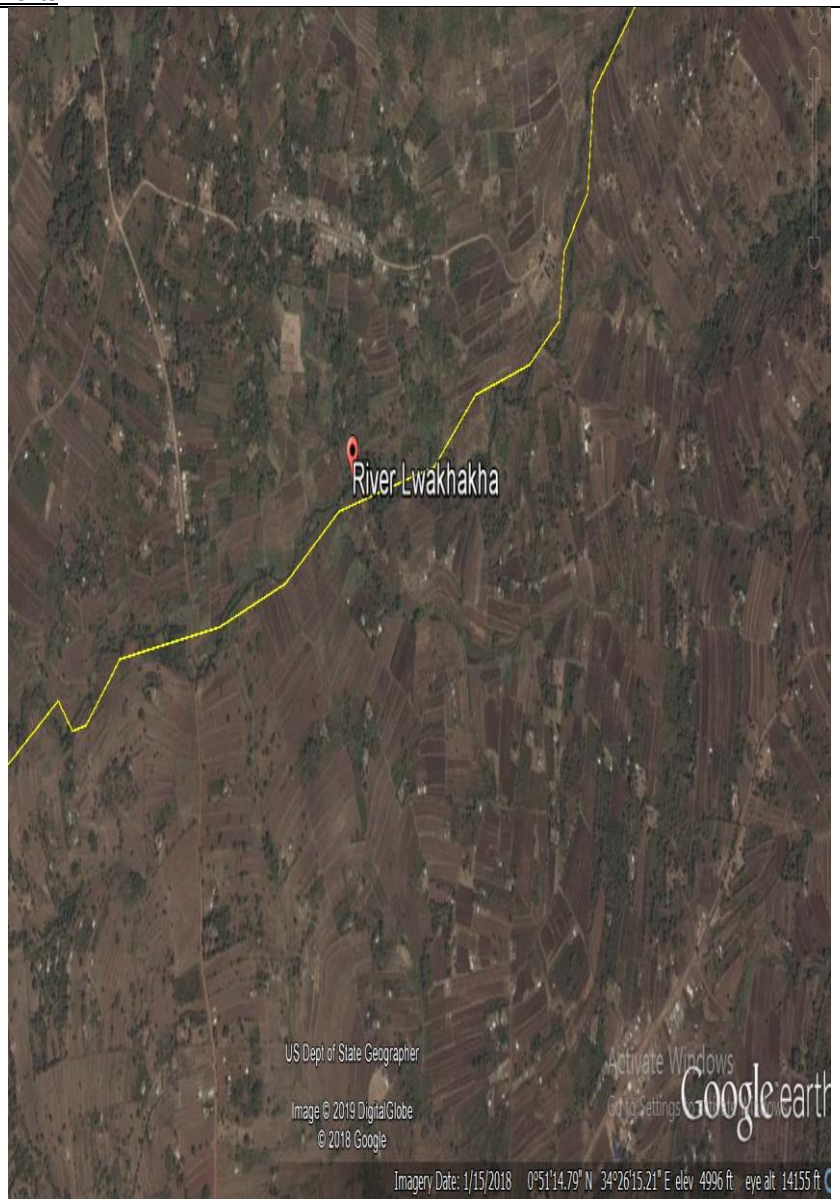


Fig. 12 - RIVER LWAKHAKHA-MALABA-MALAKISI IN BUNGOMA

Fig. 13 - KERIO RIVER IN WEST POKOT

SENSITIVE ECOSYSTEMS IN AFD/EU LOT 2

No.	County	Land types/Sensitive ecosystems
1	Kisumu	Railway Forest **(fig. 14)**
		Kisumu Impala Sanctuary, Ruma National Park **(fig. 15 & 17)**
		Lake Victoria, River Nyando **(fig. 18 & 19)**
2	Siaya	River Yala, Yala swamp, Lake Kayabol **(fig. 20, 21 & 22)**
		Got Ramogi Forest **(fig. 23)**
3	Vihiga	Kaimosi Forest **(fig. 24)**
		Isara River, Musikolo River, River Wandende, River Wasundi **(fig. 25, 26, 27 & 28)**
4	Kakamega	Kakamega Forest National Reserve **(fig. 34)**
		Isiukhu river **(fig. 35)**
5	Busia	River Malaba, River Nzoia, River Sio, Nabubolu stream, River Manyanja **(fig. 29, 30, 31, 32 & 33)**

SENSITIVE ECOSYSTEMS FOR AFD/EU LOT 3

No.	County	Land types/ Sensitive ecosystems
1	Homabay and Migori	Nyando River Delta (fig. 19)
		Lake Victoria (fig. 18)
		Forest
		Hills: Maeta, Magaimuya and Taragwiti Hills
		Islands: Ngodhe and Takawir (fig. 40)
		Bala Hot Springs
		Cultural Shrines: Mawanga and Kwitone Rock Art
2	Kisii and Nyamira	Sironga Wetland
		Nyangweta Forest **(fig. 39)**
		Hills: Sameta, Taracha, Nyacheki, Nyangweta, Kiong'anyo Kiabonyoru, Nyabisimba, Nkoora, Kemasare and Manga.
		Manga ridges
		River Gucha catchment (Kiabonyoru)
3	Bomet	Mara River Basin (fig. 38)
		Mau Forest (fig. 37 & 41)
		Motigo Hills

Maps:

KISUMU COUNTY

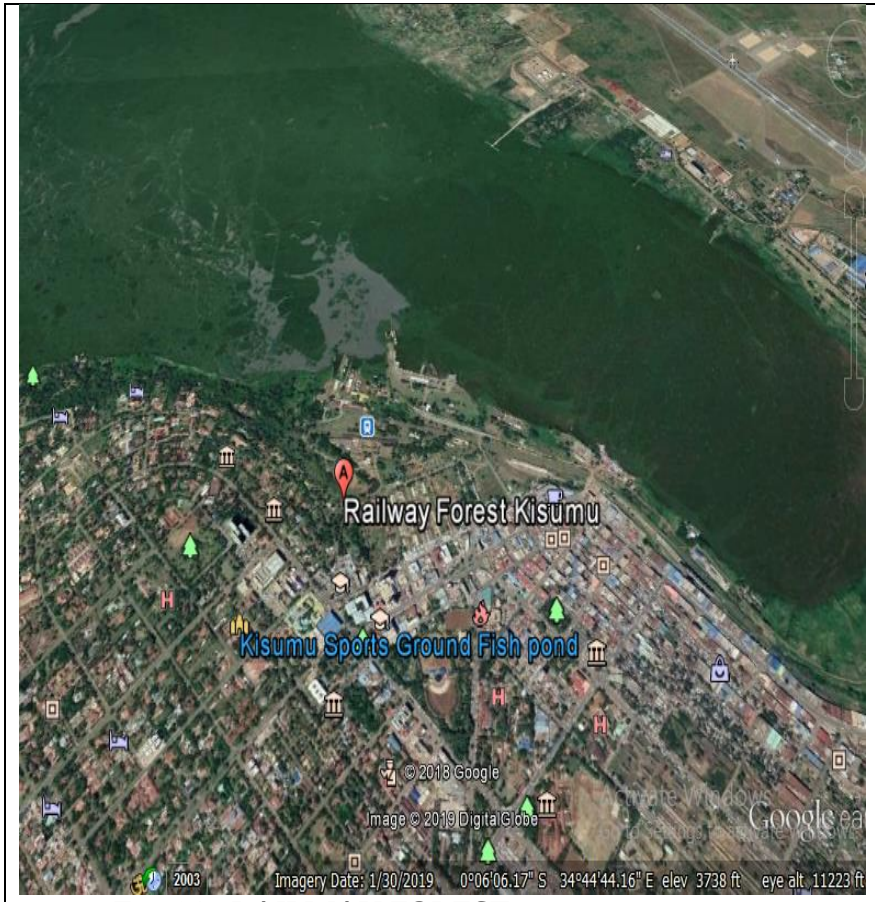


Fig. 14 - RAILWAY FOREST

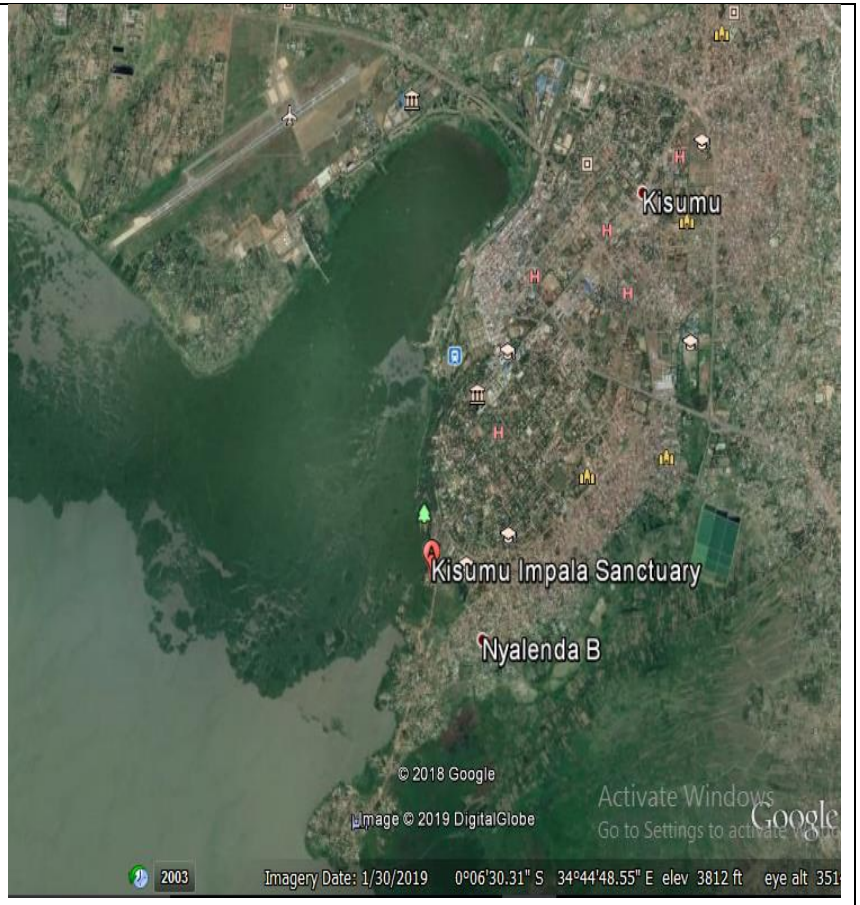


Fig. 15 - KISUMU IMPALA SANCTUARY

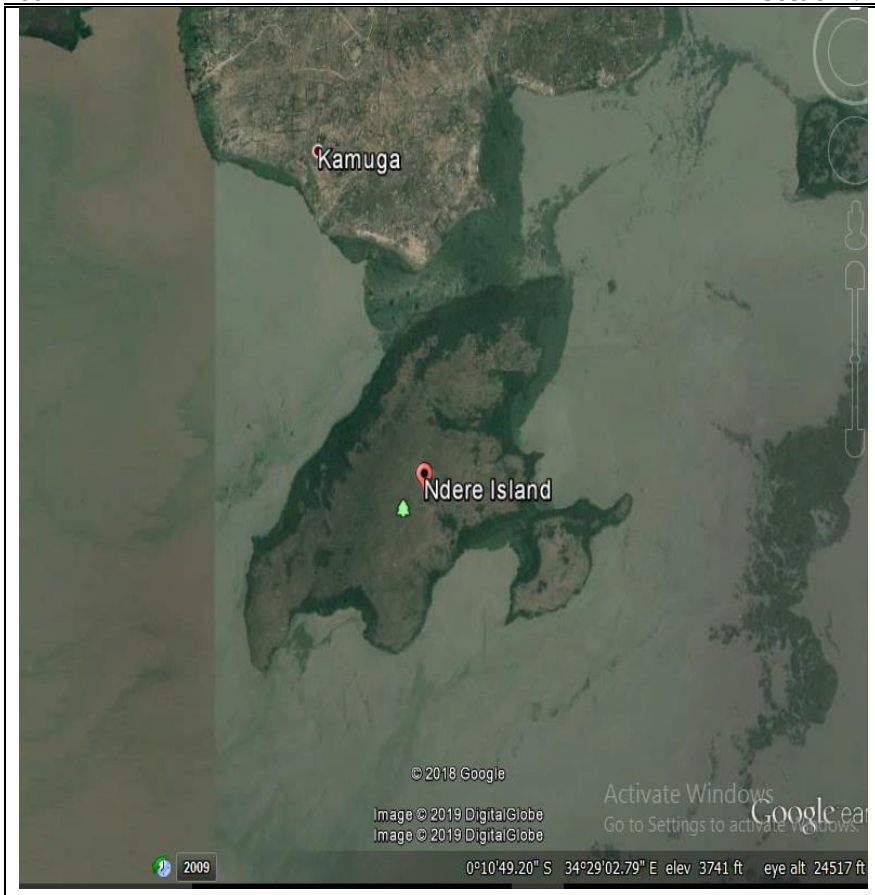


Fig. 16 - NDERE ISLAND

Fig. 17 - RUMA NATIONAL PARK

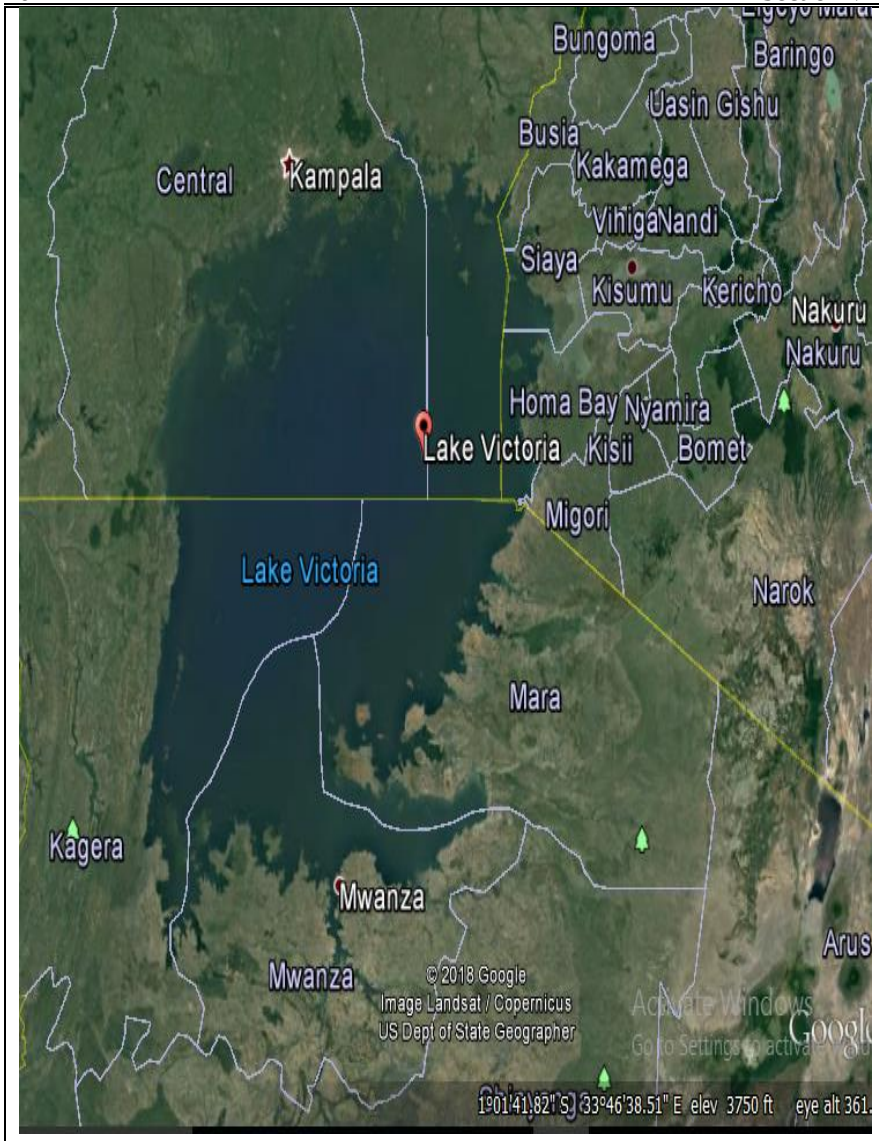


Fig. 18 - LAKE VICTORIA

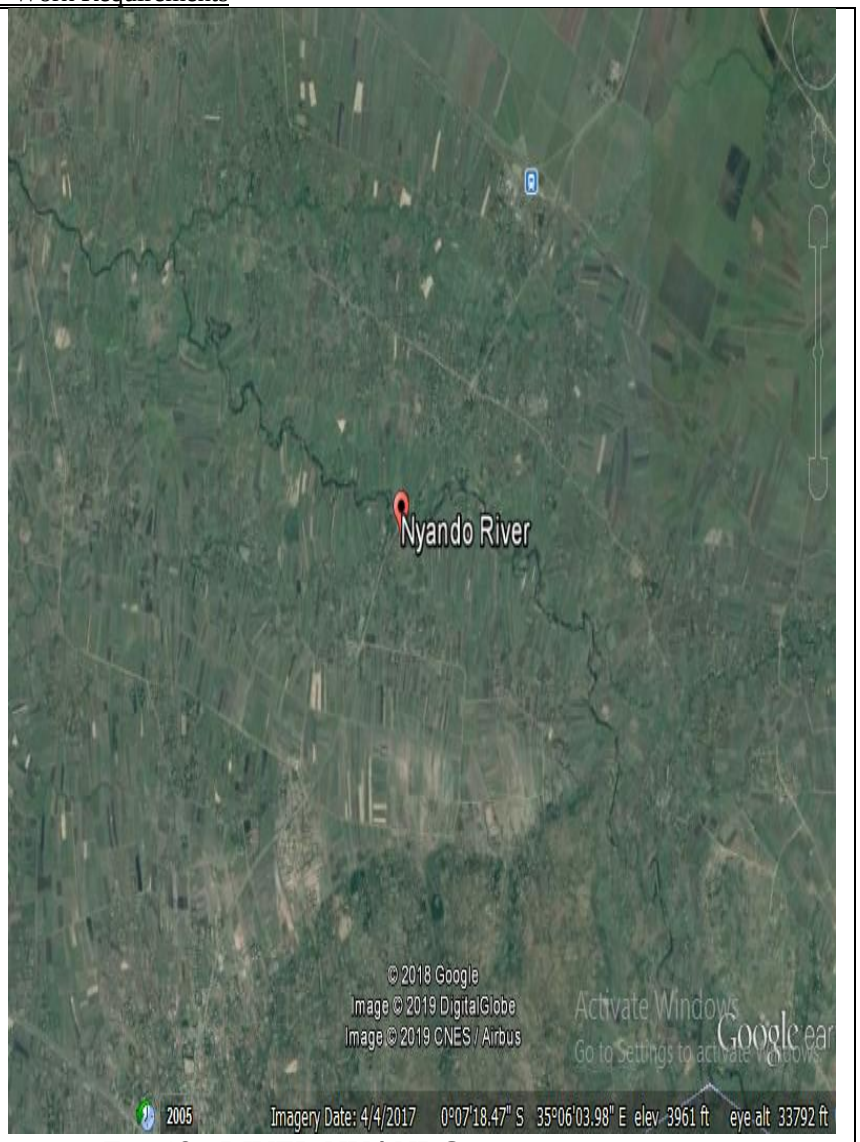


Fig. 19 - RIVER NYANDO

SIAYA COUNTY

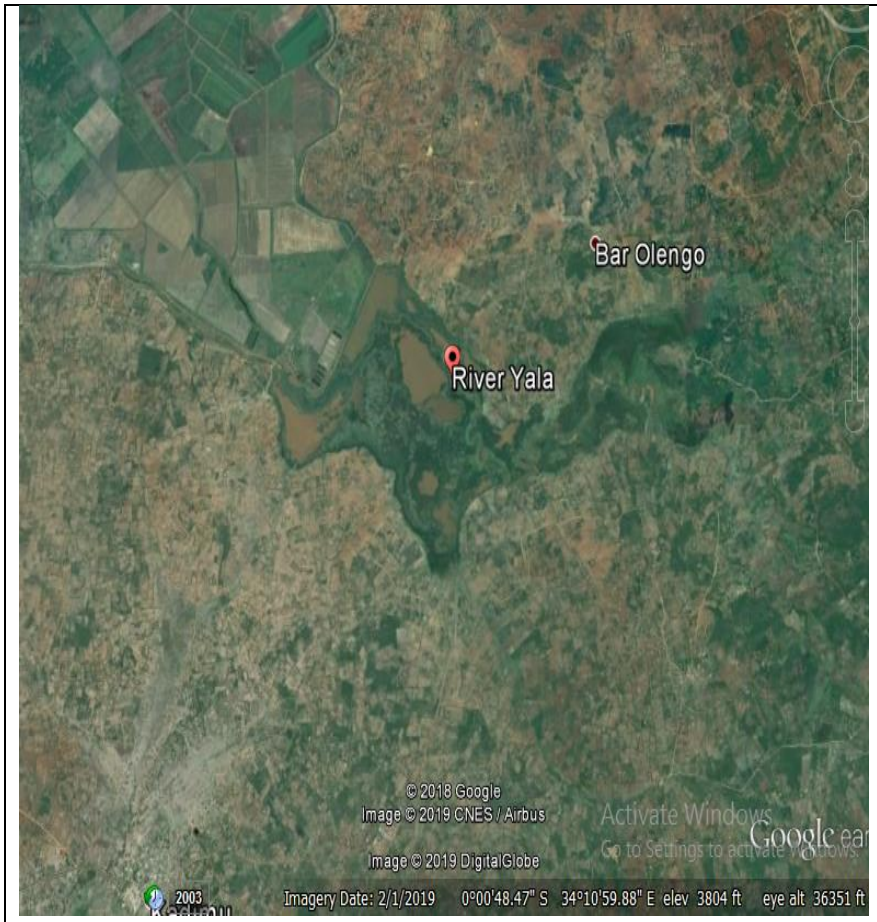


Fig. 20 - RIVER YALA

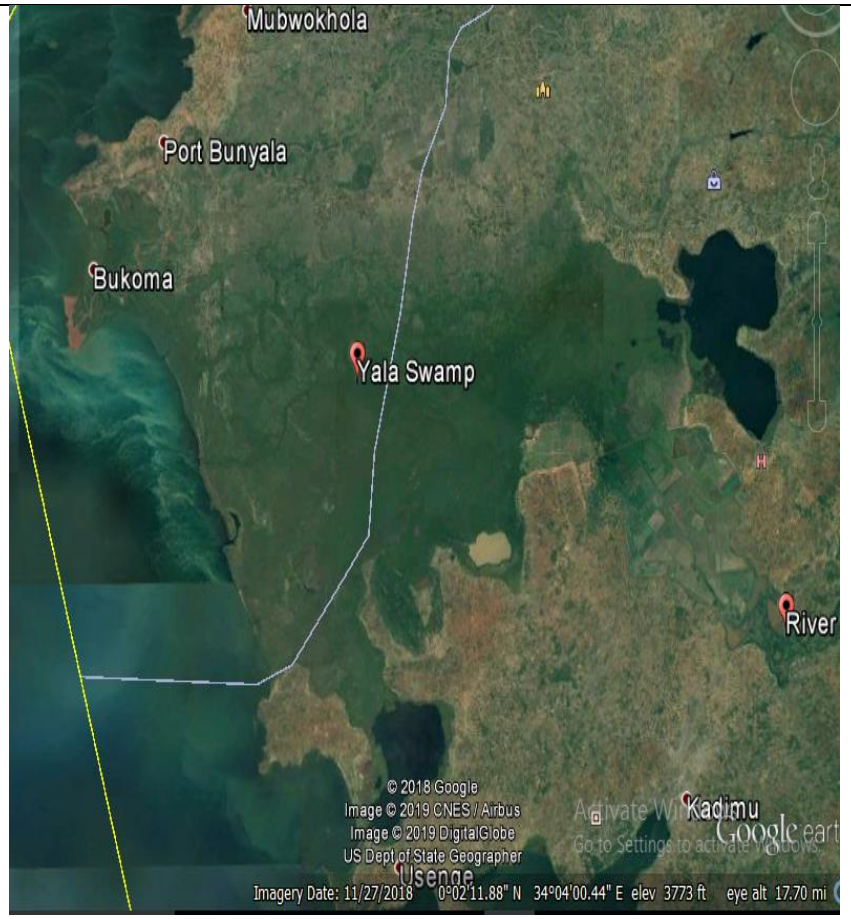


Fig. 21 - YALA SWAMP

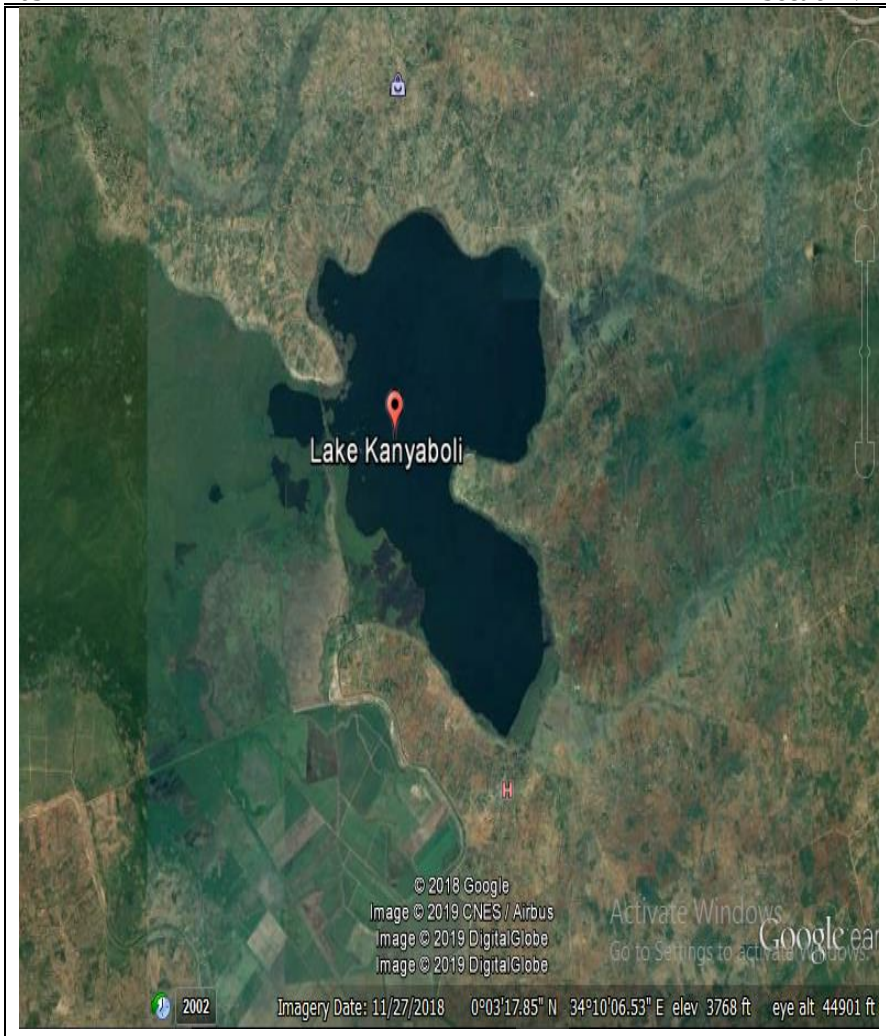


Fig. 22 - LAKE KANYABOLI

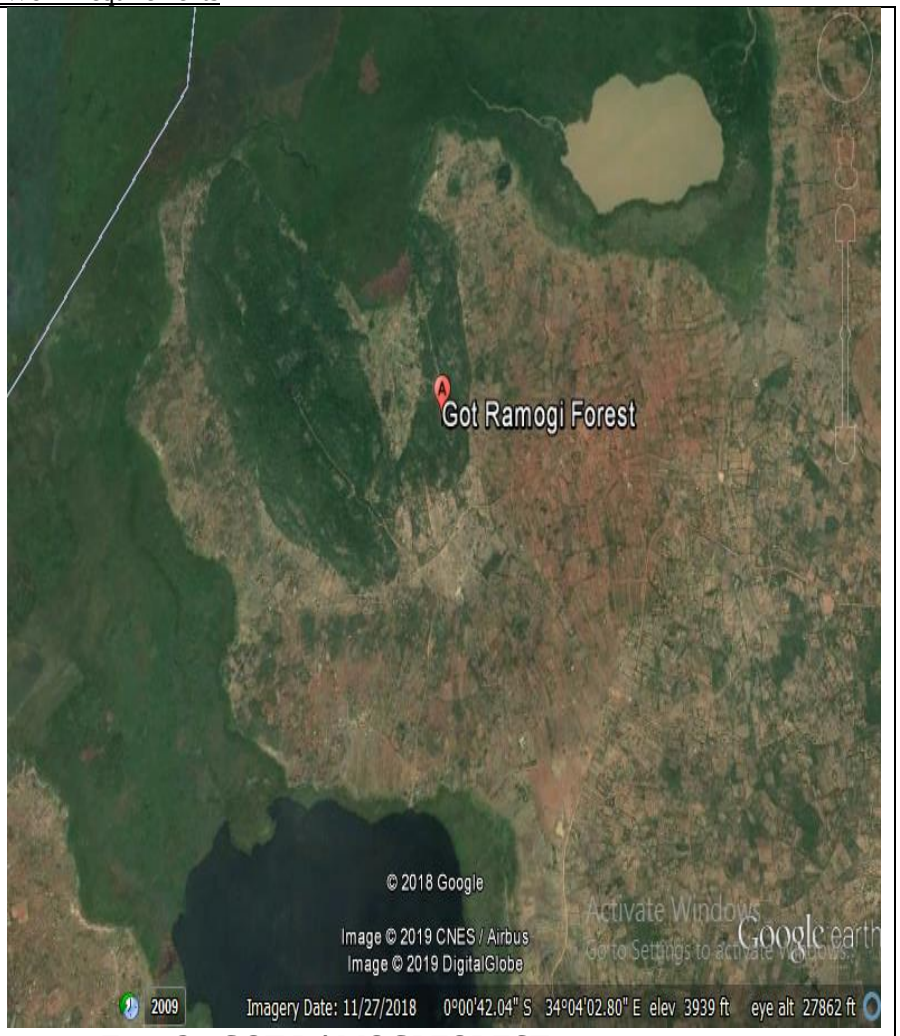


Fig. 23 - GOT RAMOGI FOREST

VIHIGA COUNTY

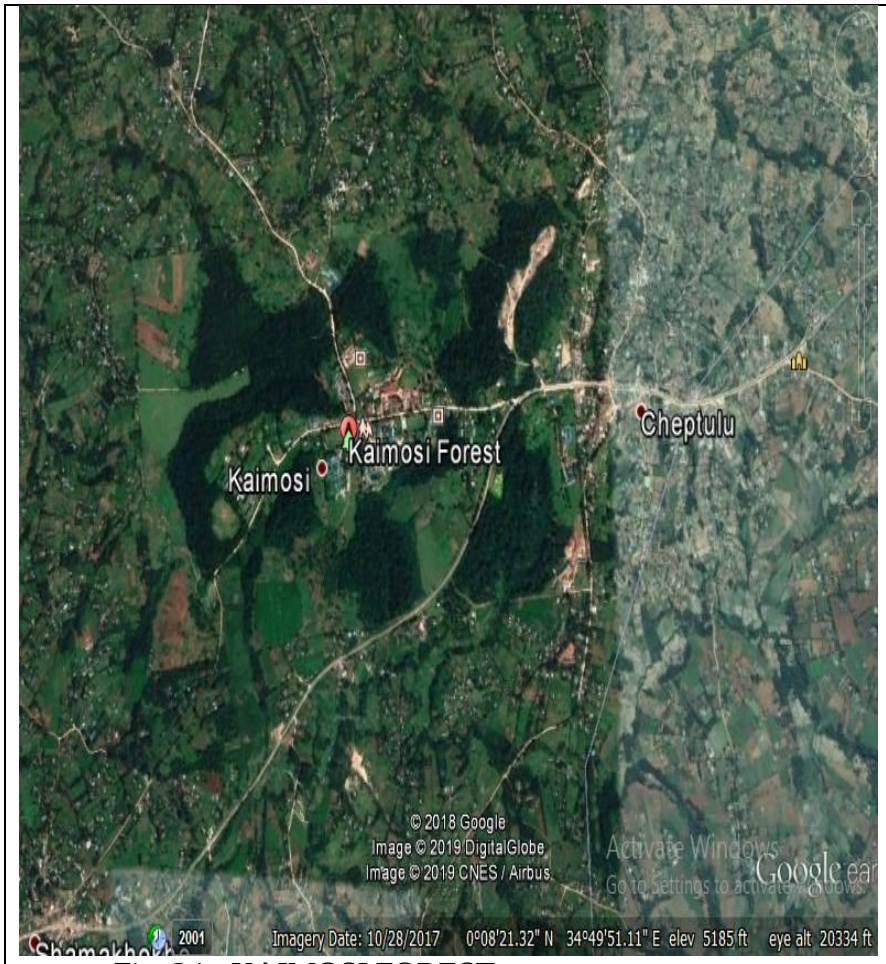


Fig. 24 - KAIMOSI FOREST

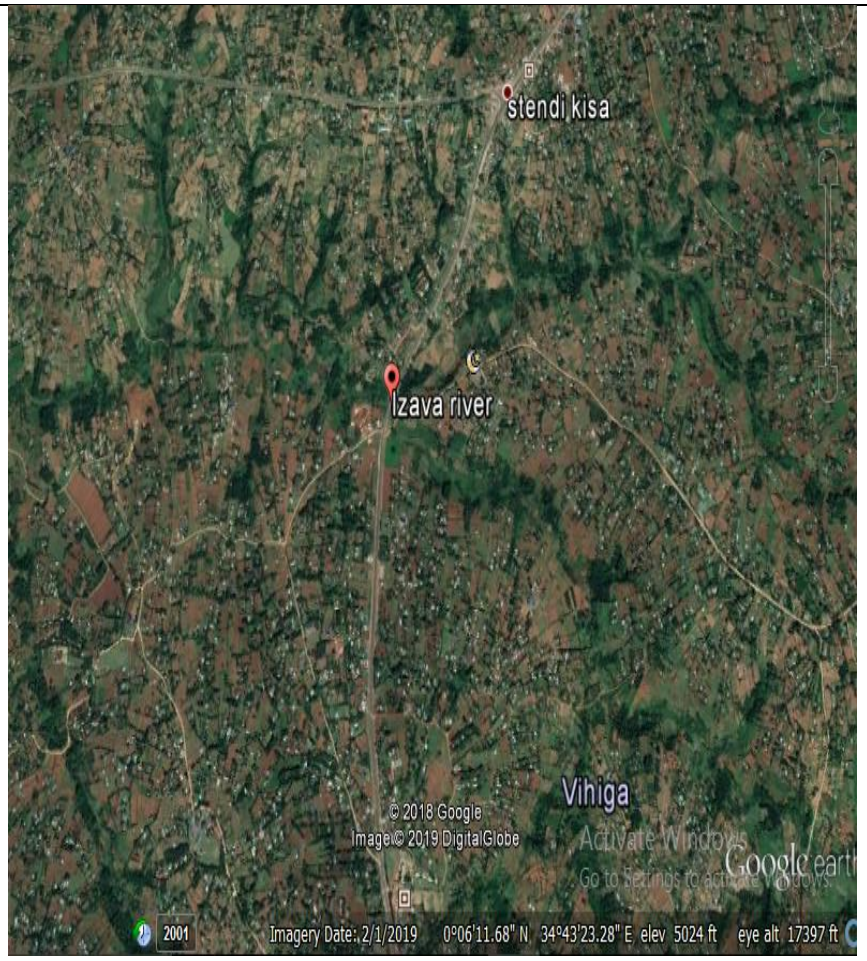


Fig. 25 - ISAVA RIVER

Fig. 26 - MUSIKOLO RIVER

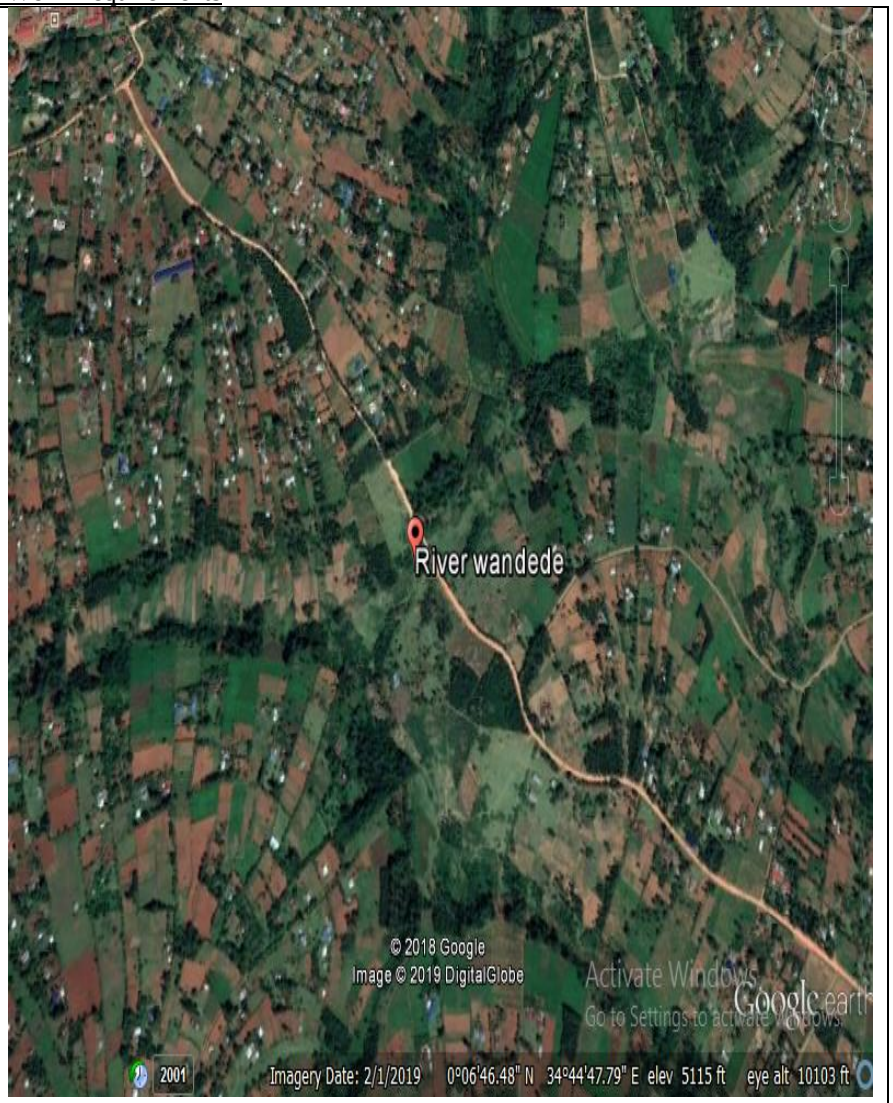


Fig. 27 - RIVER WANDEDE

Fig. 28 - RIVER WASUNDI

Fig. 29 - RIVER MALABA

BUSIA COUNTY

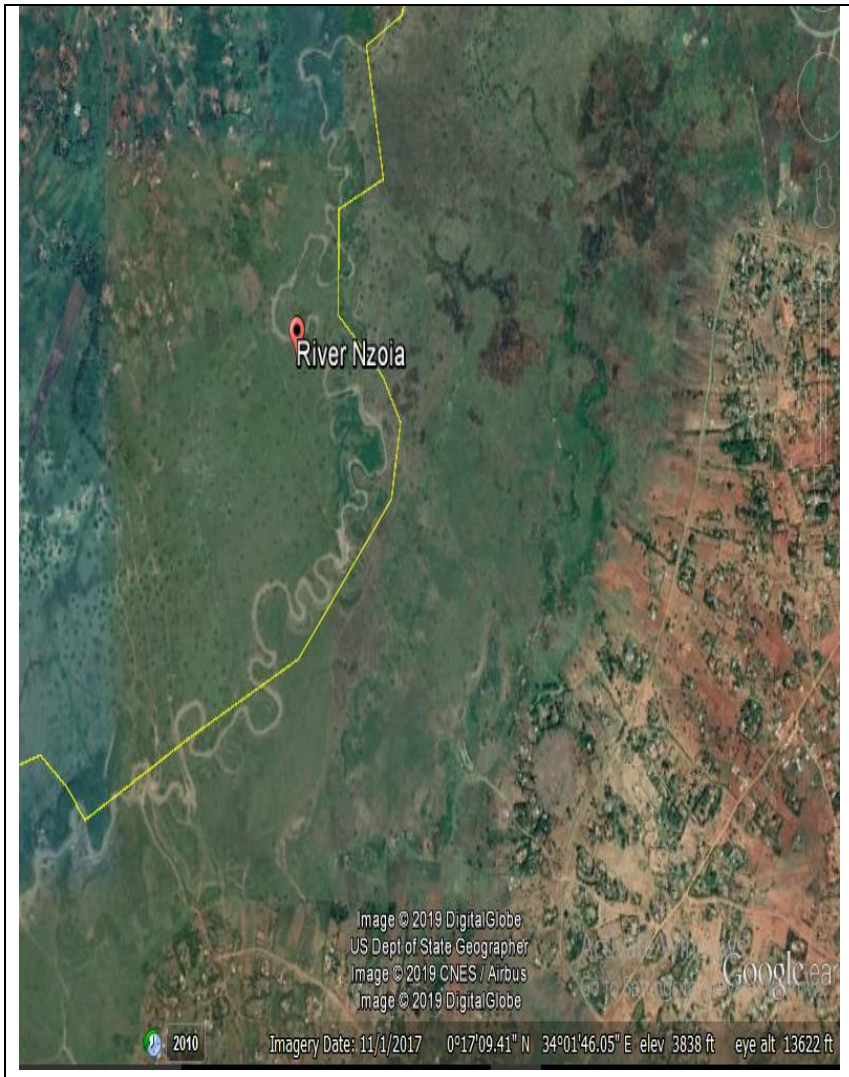


Fig. 30 - RIVER NZOIA

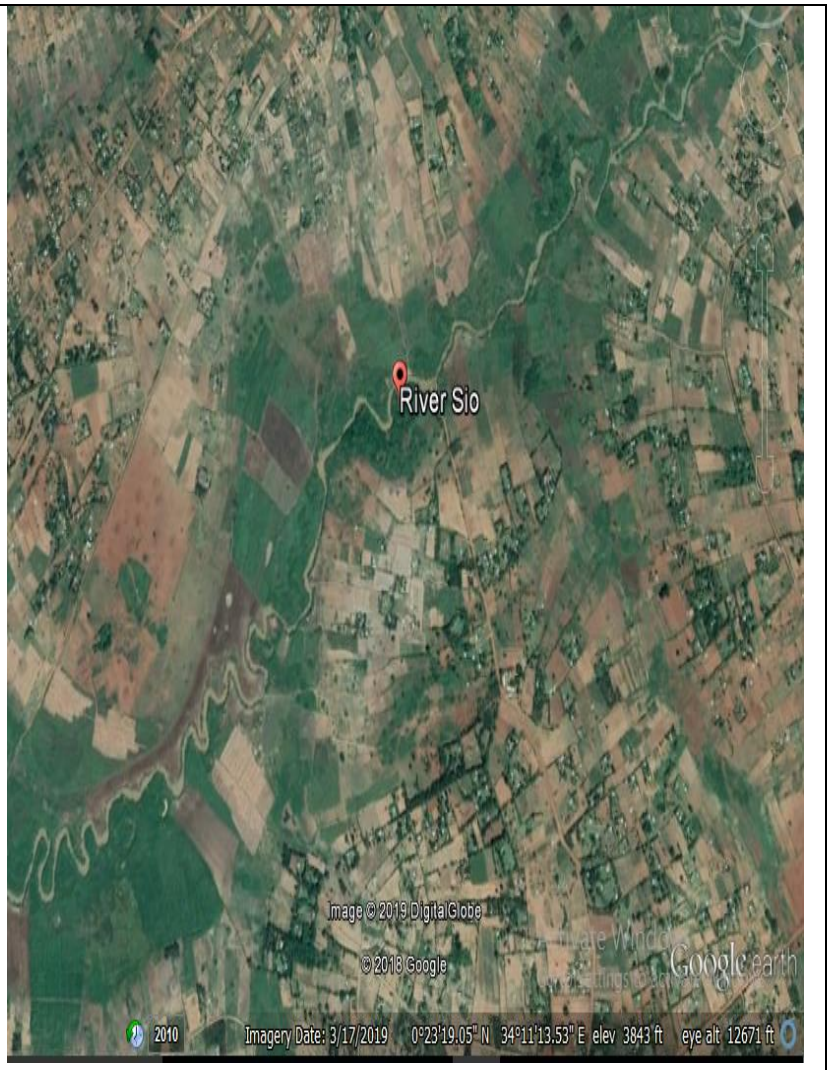


Fig. 31 - RIVER SIO

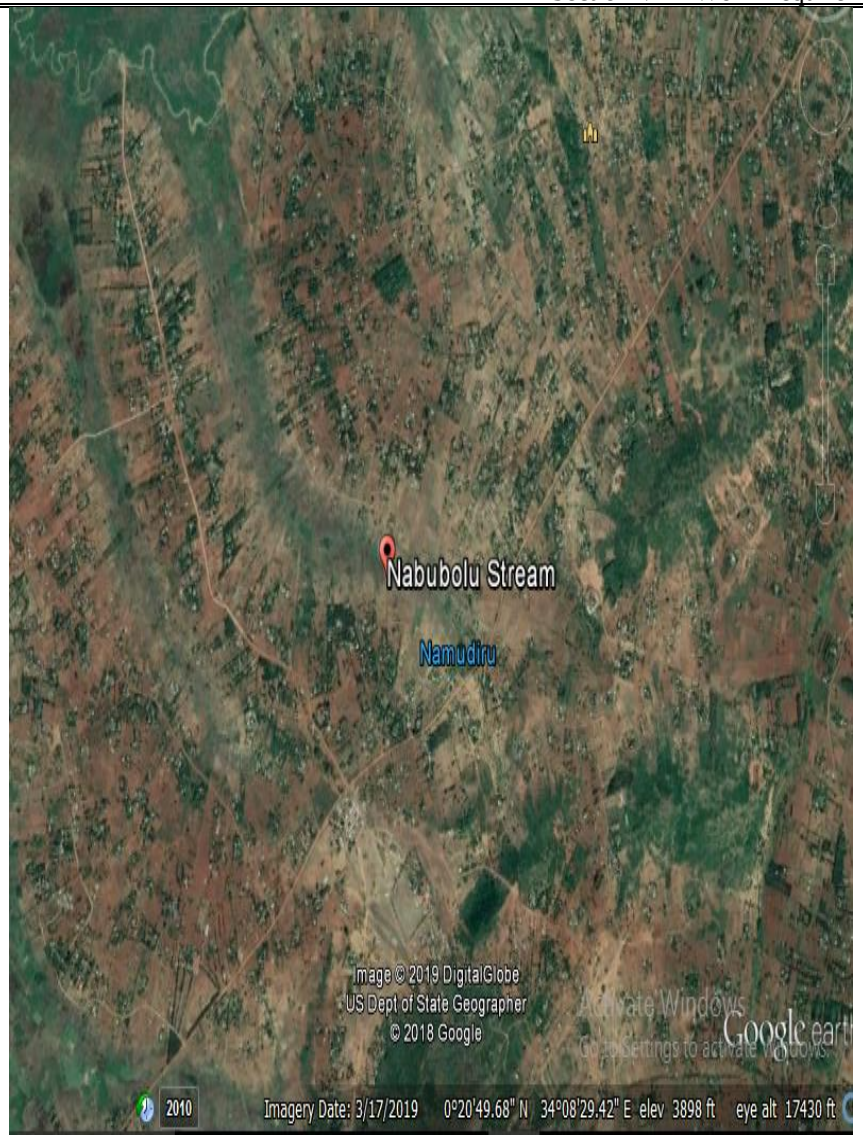


Fig. 32 - NABUBOLU STREAM

Fig. 33 - RIVER MAYANJA

KAKAMEGA COUNTY

Fig. 34 - KAKAMEGA FOREST NATIONAL RESERVE.

Fig. 35 - ISIUKHU RIVER

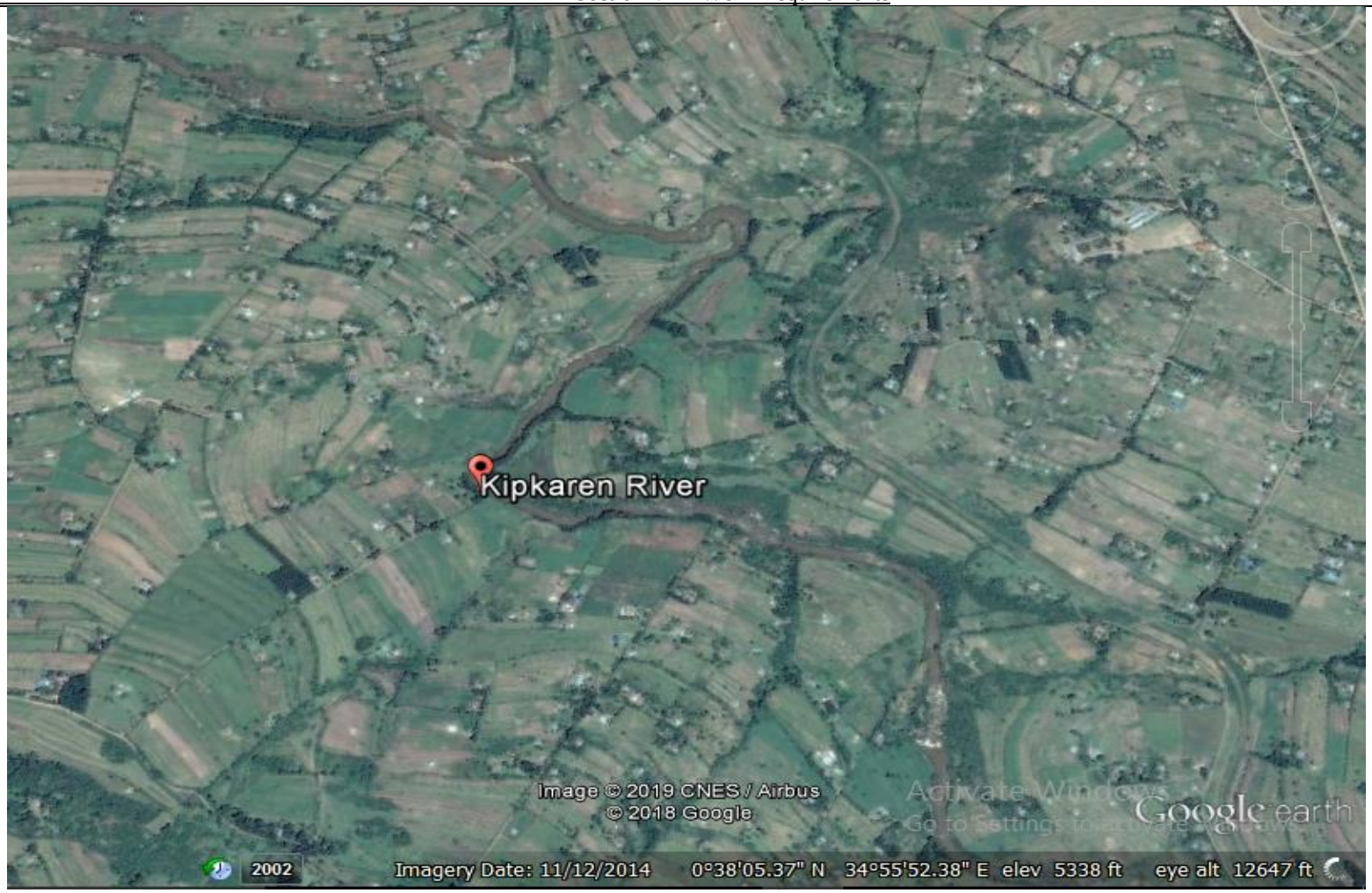


Fig. 36 - Kipkaren River

SENSITIVE ECOSYSTEMS IN AFD/EU LOT 4

SENSITIVE ECOSYSTEMS FOR AFD/EU LOT 4

No.	County	Land types/Sensitive ecosystems
1	Narok	Mau Forest, Olposimoru and Transmara Forests **(fig. 41 & 44)**
		Mara River, Ewaso Myiro River **(fig. 43 & 49)**
		Maasai Mara Game Reserve **(fig. 42)**
2	Nyandarua	Aberdare Forest, Ol Bolosat, Magumu North, Magumu South, Muruai, Kirima Forests **(fig. 46)**
		lake Ol Bolosat, Ewaso Nyiro River, Malewa River **(fig. 47, 48 & 49)**
		Aberdare Ranges **(fig. 46)**
3	Nakuru	Lakes: Nakuru, Naivasha and Elementaita.**(fig. 50, 51 & 52)**
		Lake Nakuru National Park, Hells Gate National Park **(fig. 51)**
		Forests: Eburu Forest, Bahati, Eastern Mau, Eburu, Eastern Mau, Kijabe Hill, Mau Narok, Menengai, West Molo **(fig. 54, 55, 56, 57 & 58)**
		Hills: Hyrax Hills and Ndiuni Hills **(fig. 59)**
		Swamps: Barina Swamp
4	Laikipia	**Forests**: Mukogodo, Lariak, Marmanet, Ng'arua, Rumuruti and Shamaneik **(fig. 61)**
		Rivers: Ewaso Narok (Ngare Naro), Narumoru, Likii, Sirimon, Ontulili, Ngare Ndare, Melwa, Ngare Nything, Ngobit, Rongai, Timau, Moyak, Pesi, Suguroi, Mutara, Nanyuki, and Burguret Rivers.
5	Nyeri	**Forests**: Aberdare Ranges, **Mt. Kenya**, Karima Hill, Tumutumu Hill, Gachirichiri, Wagere, Karundu, Karindi, Thangathi, Ngamwa Hilltop and Gachuthe **(fig. 46 & 62)**
6	Kericho	**Mau Forest** -it is inhabited by a minority group called the Ogiek who are hunters/ gatherers. Also Tindiret Forest and Londiani Forest **(fig. 37 & 57)**
		Rivers: Chemosit, Mara Mara, Itare, Kipsonoi and Timbilil **(fig. 38 & 64)**

Maps showing sensitive ecosystems:

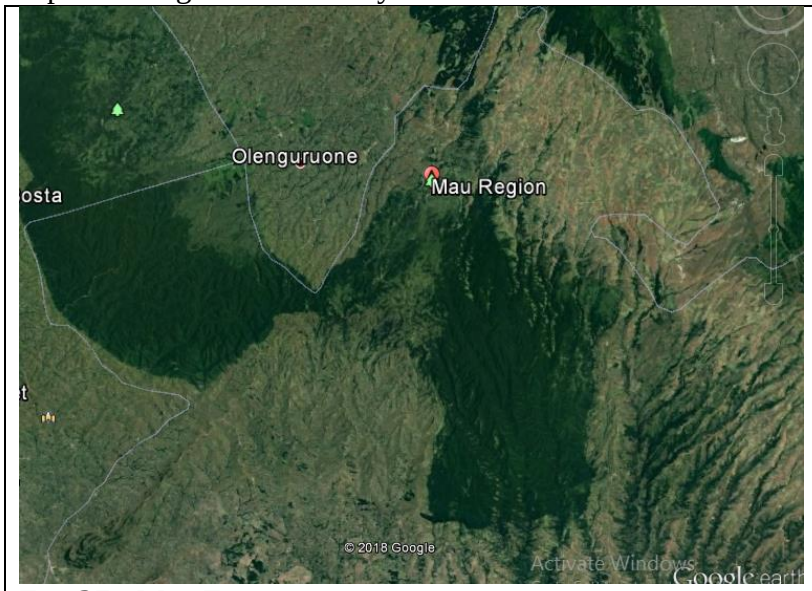


Fig. 37 - Mau Forest
Coordinates 0°36’55.95”S, 35°44’23.90” E

Fig. 38 - Mara River Basin
Coordinates 1°31’52.32”

Fig. 39

Fig. 40

Maps:

Fig. 41 - Mau Forest

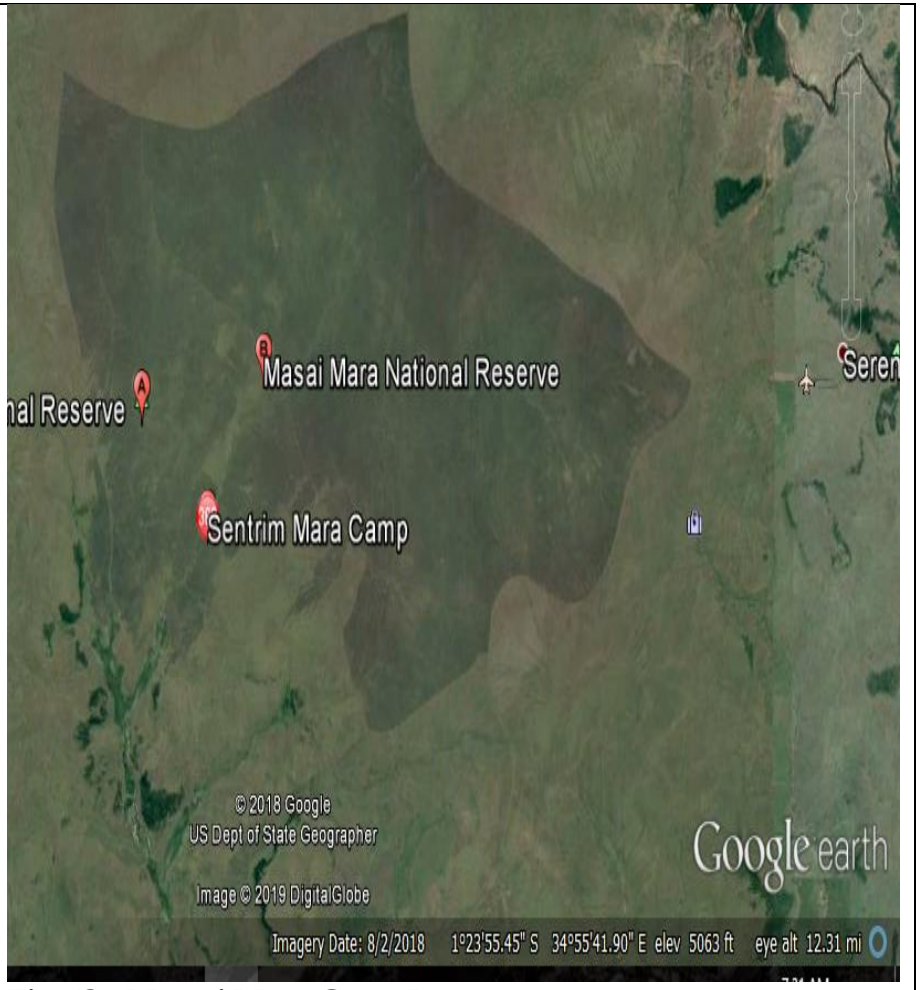


Fig. 42 - Maasai Mara Game Reserve.

Fig. 43 - The Mara River.

Fig. 44 - Trans-Mara Forest
Coordinates 0°37’41.92”S, 35°37’44.22”E

Fig. 45 - Elewana sand river, maasai mara

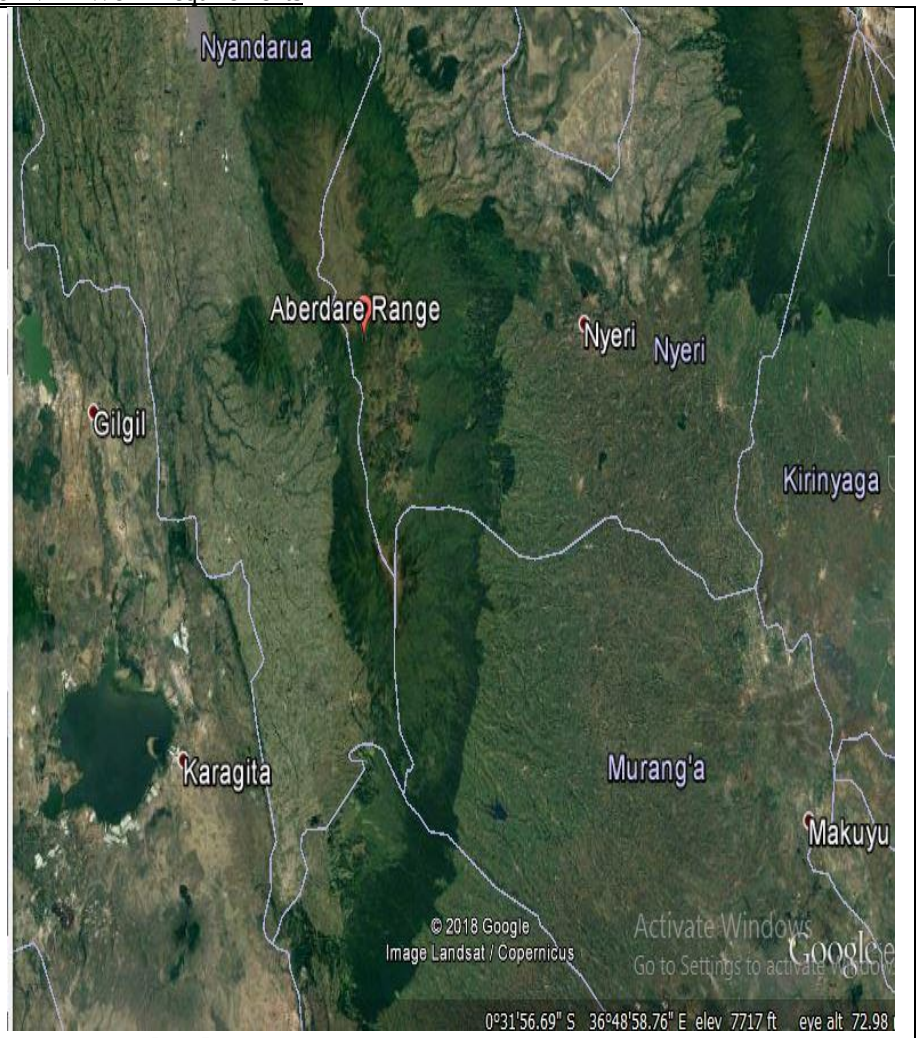


Fig. 46 - Aberdare Ranges.

Fig. 47 - Lake Ol Bolossat

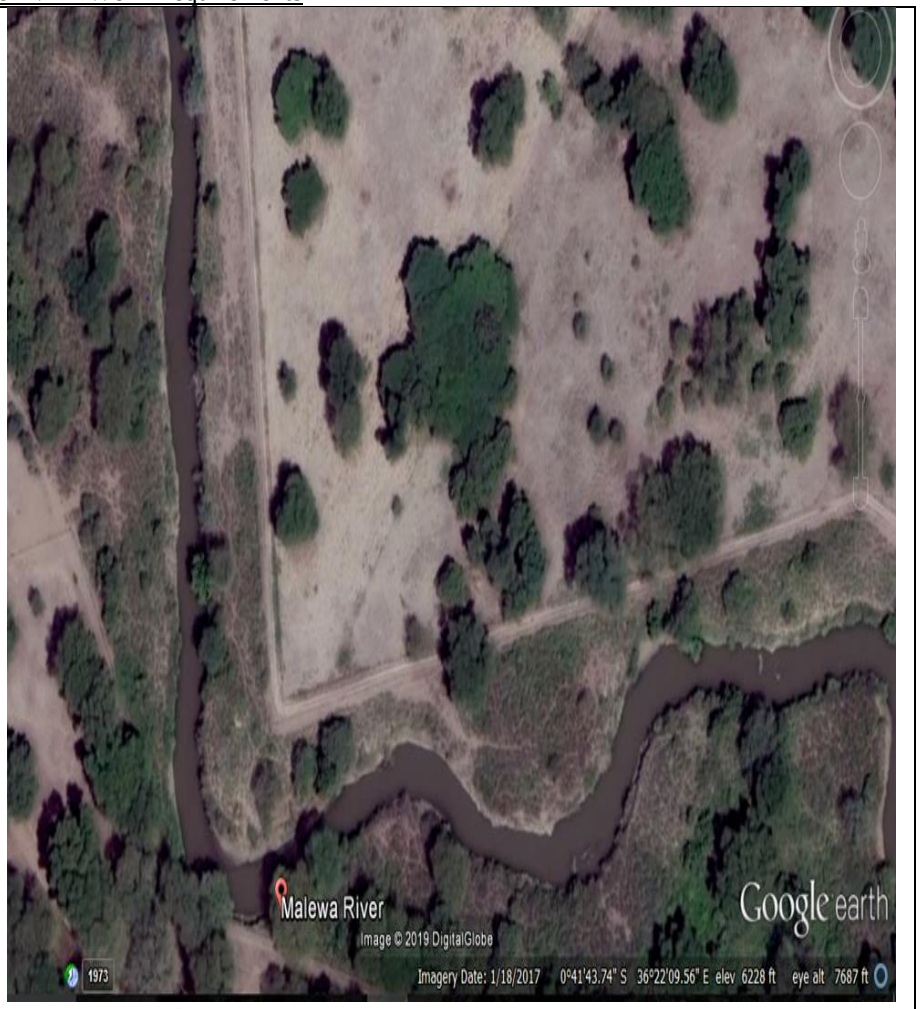


Fig. 48 - Malewa river

Fig. 49 - Ewaso nyiro river

Fig. 50 - Lake Naivasha

Fig. 51 - Lake Nakuru & Lake Nakuru National park. Coordinates 0°21'22.24"S, 36°06'00.79"E

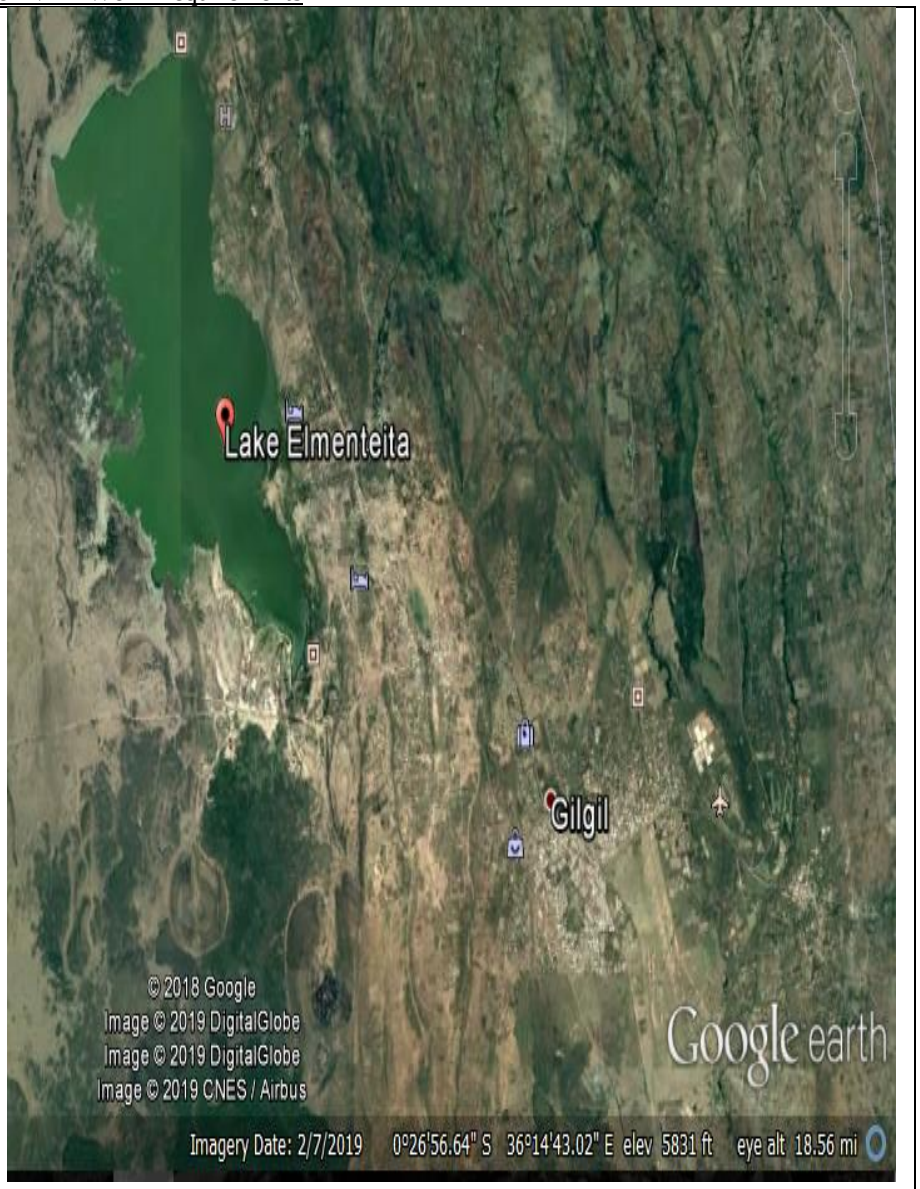


Fig. 52 - Lake Elementaita

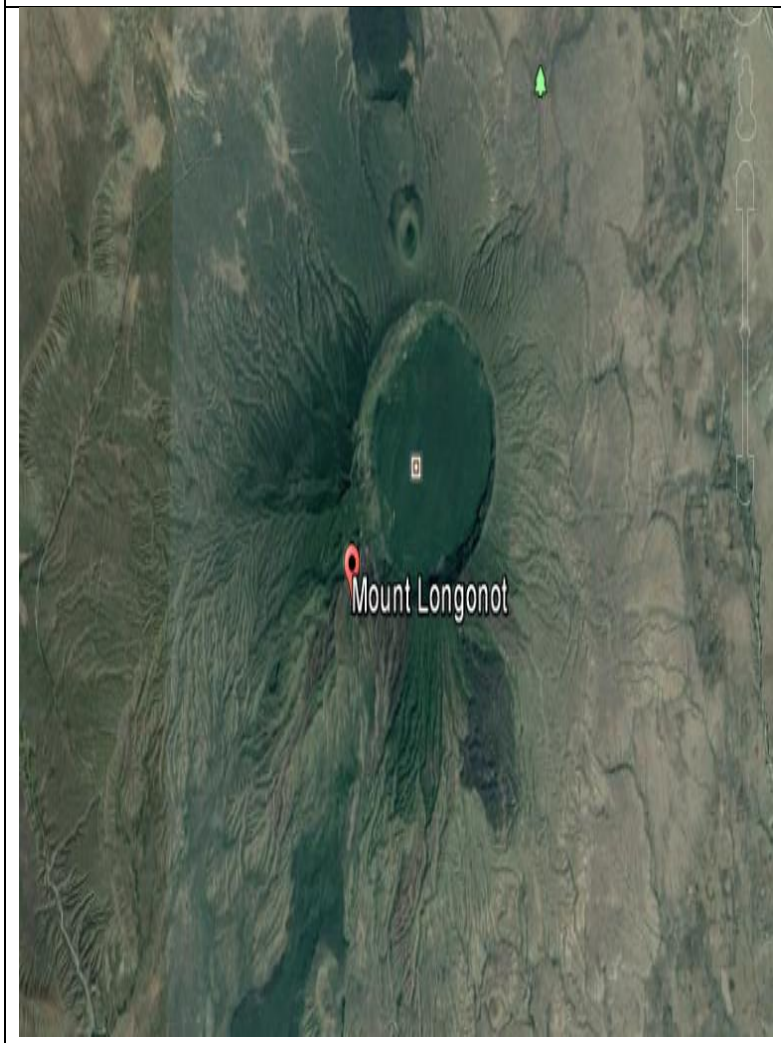


Fig. 53 - Mount Longonot
Coordinates 0°55’15.61”S, 36°26’50.13”E

Fig. 54 - Bahati forest
Coordinates 0°10’15.51”S, 36°11’58.05”E

Fig. 55 - Eburu Forest.
Coordinates 0°40'24.19"S, 36°11'21.39"E

Fig. 56 - Eastern Mau Forest
Coordinates 0°27'11.02"S, 35°51'49.02"E

Fig. 57 - Mau Narok Forest
Coordinates 0°39'13.03"S, 35°57'05.22"E

Fig. 58 - Menengai Forest.
Coordinates 0°14'44.12"S, 36°05'12.96"E

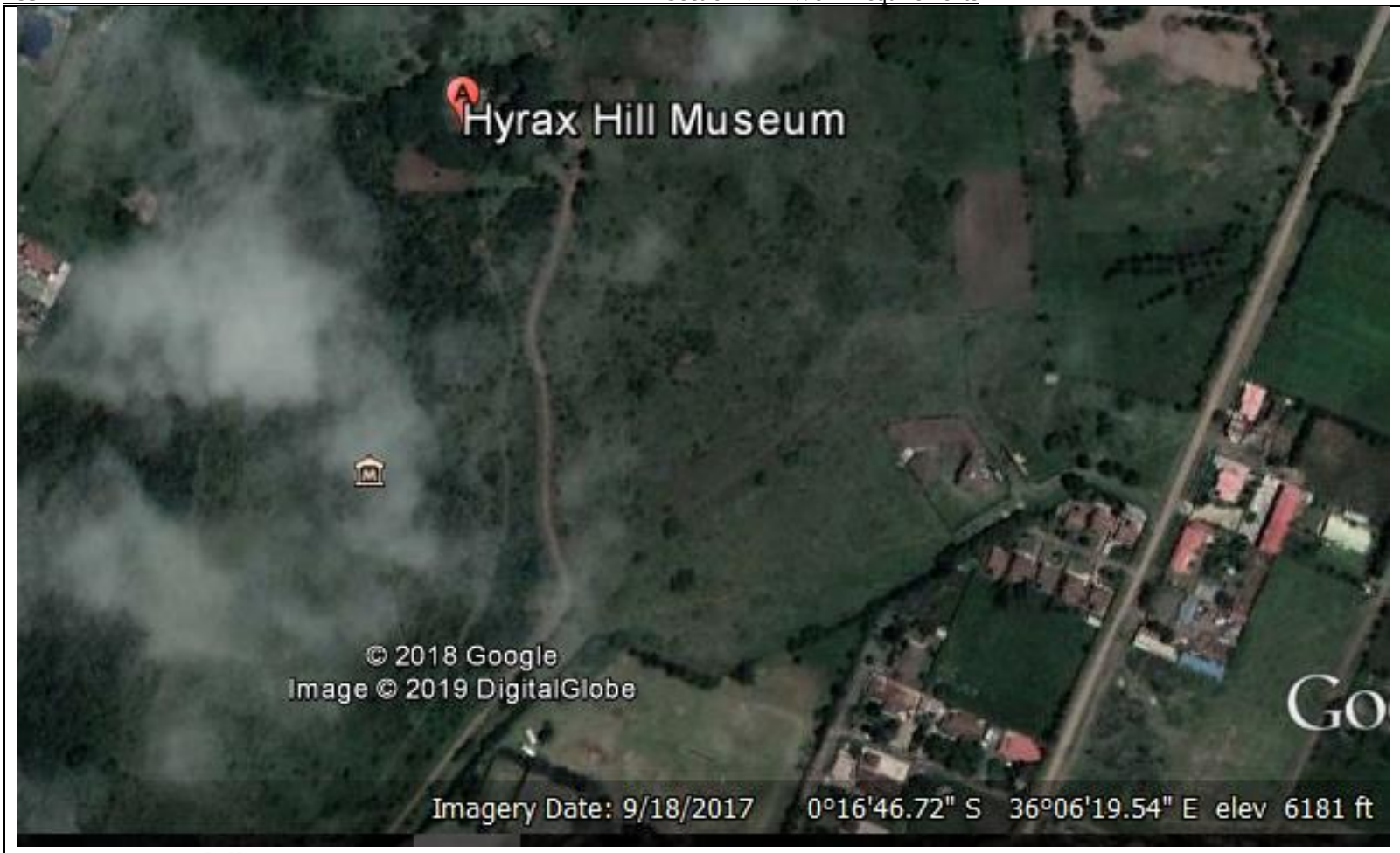


Fig. 59 - Hyrax hill

SENSITIVE ECOSYSTEMS IN AFD/EU LOT 5

No.	County	Land types/Sensitive ecosystems
1.	Meru	**Lake** Nkunga- within Imenti Forest and surrounded by natural springs. Also Lake Ellis **(fig. 63)**
		Swamps/ Wetlands: Mbutubutia (Tigania West), Baisigiria (Buuri), Ithindi (Igembe Central), Mporoko (Igembe South), Rurie (Imenti Central)
		Rivers: Kathita, Mariara, Thingithu, Kithino, Ura, Thangatha, Mutonga, Thanantu, Iraru, Rujiweru, Kathangatha
		Forests: Tamani Forest, Kirimachuma forest, Nguthiru Laingo Forest, **Mt Kenya Forest**, Nyambene Forest and Imenti Forest **(fig. 62)**
		Rivers: Sagana, Nyamindi, Rupingazi, Thiba, Rwamuthambi and Ragati, which ultimately drain into the Tana River.
		River Mathioya **(fig. 60)**
2.	Kirinyaga	**Forests**: **Mt. Kenya**, Njukiini West, Murinduku, Kariani, Kamaruana, Karimandu and Kerugoya Urban forest **(fig. 62)**
		Rivers: Sagana, Nyamindi, Rupingazi, Thiba, Rwamuthambi and Ragati, which ultimately drain into the Tana River.
		River Mathioya **(fig. 60)**
3.	Murang'a	**Forests**: Gatare, Karua, Kimakia, Kiambicho and Wanjerere
		River Mathioya **(fig. 60)**
4.	Tharaka Nithi	**Forests:** Mt. Kenya, Chogoria and Chuka Forest station
5.	Embu	**Forests**: Mulinduko, Maranga

Maps showing the sensitive ecosystems

Fig. 60 - Mathioya river in Muranga county (0^0 42`58.37S $37^0$ 08`00.14E)

Fig. 61 - Marmanet forest in Laikipia county (0^0 13`18.42N $36^0$ 16`48.33E)

Fig. 62 - Mt. Kenya forest in Kirinyaga county (0^0 16`38.71S $37^0$ 24`26.58E)

Fig. 63 - Lake Nkunga in Meru county (0^0 06`56.61N $37^0$ 35`41.32E)

Fig. 64 - Chemosit river in Kericho county (0^0 28`31.13S $35^0$ 10`26.01E)

SENSITIVE ECOSYSTEMS IN AFD/EU LOT 6

No.	County	Land types/ Sensitive Ecosystems
1	Kajiado	Lake Magadi **(fig. 65)**
		Ngong Hills **(fig. 66)**
		Ngong Forest Sanctuary **(fig. 67)**
		Ngurumani Escarpment **(fig. 68)**
		Amboseli National Park **(fig. 69)**
2	Makueni	Makongo Forest **(fig. 70)**
		Kilungu forest **(fig. 71)**
		Chyulu hills National Park **(fig. 72)**
		Amboseli National Park **(fig. 69)**
3	Kitui	Nuu Forest **(fig. 73)**
		Endau Forest
		Gaikuyu Forest
		Mumoni forest **(fig. 74)**
		Tsavo East **(fig. 75)**
4	Kilifi	Arabuko Sokoke Forest **(fig. 76)**
		Kaya Shrines **(fig. 77)**
		Dakacha Woodlands
		mangrove forests along the coast line
5	Kwale	Shimba hills National park **(fig. 78)**
		Buda Forest **(fig. 79)**
		Gogoni Forest **(fig. 80)**
		Gonia forest
		Jombo forest **(fig. 81)**

No.	County	Land types/ Sensitive Ecosystems
		Mailunganji forest
		Marenji forest **(fig. 82)**
		Mkongani forest **(fig. 83)**
6	Taita Taveta	Tsavo West National Park **(fig. 84)**
		Taita Taveta Wildlife Sanctuary
		Mwandongo Forest
		Ngangao forest **(fig. 85)**
		Kasigau Forest
		Kinyesha Mvua
		Irizi
		Muraru
		Vuria

Sample Google maps of sensitive ecosystems across the counties

Fig. 65 - Lake Magadi-kajiado county

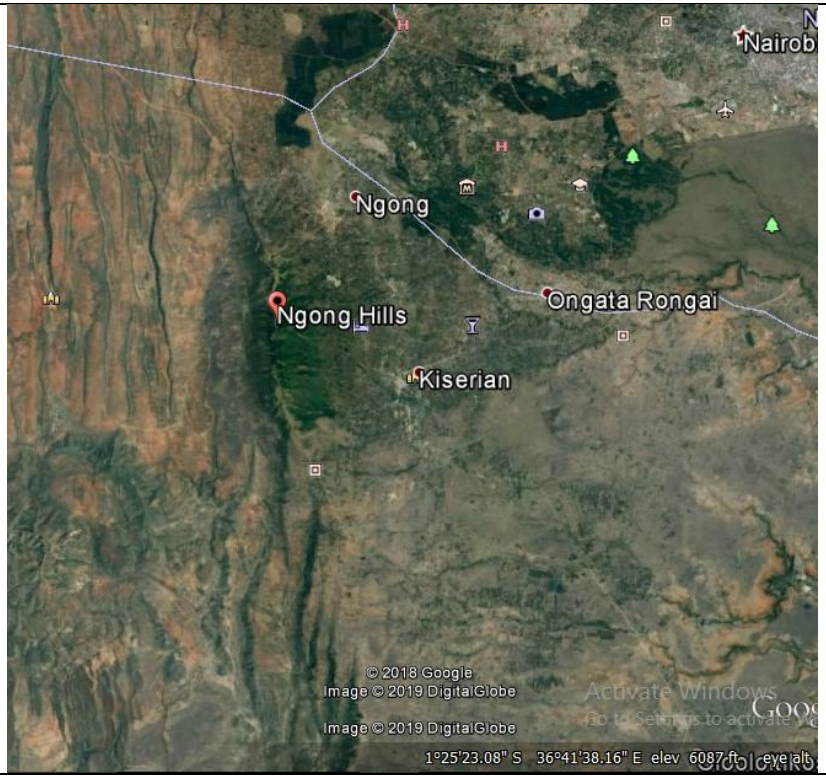


Fig. 66 - Ngong Hills – Kajiado County

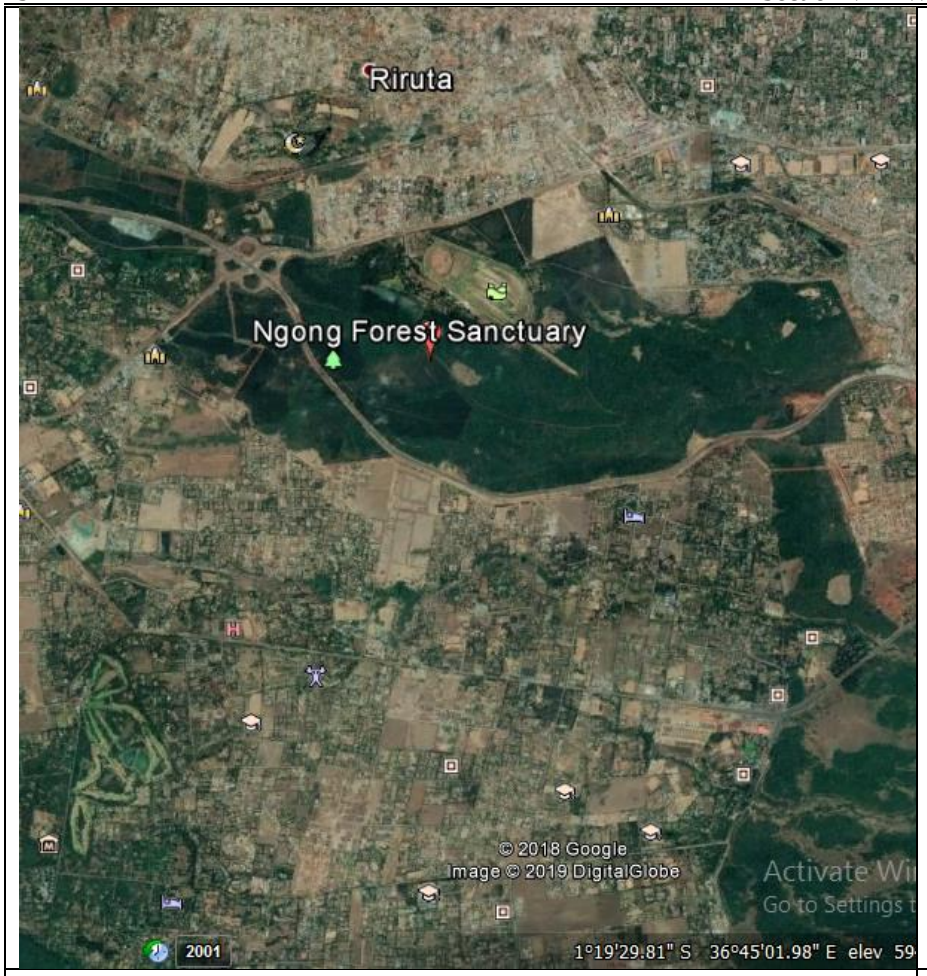


Fig. 67 - Ngong Forest Sanctuary County

Fig. 68 - Ngurumani Escarpment- Kajiado

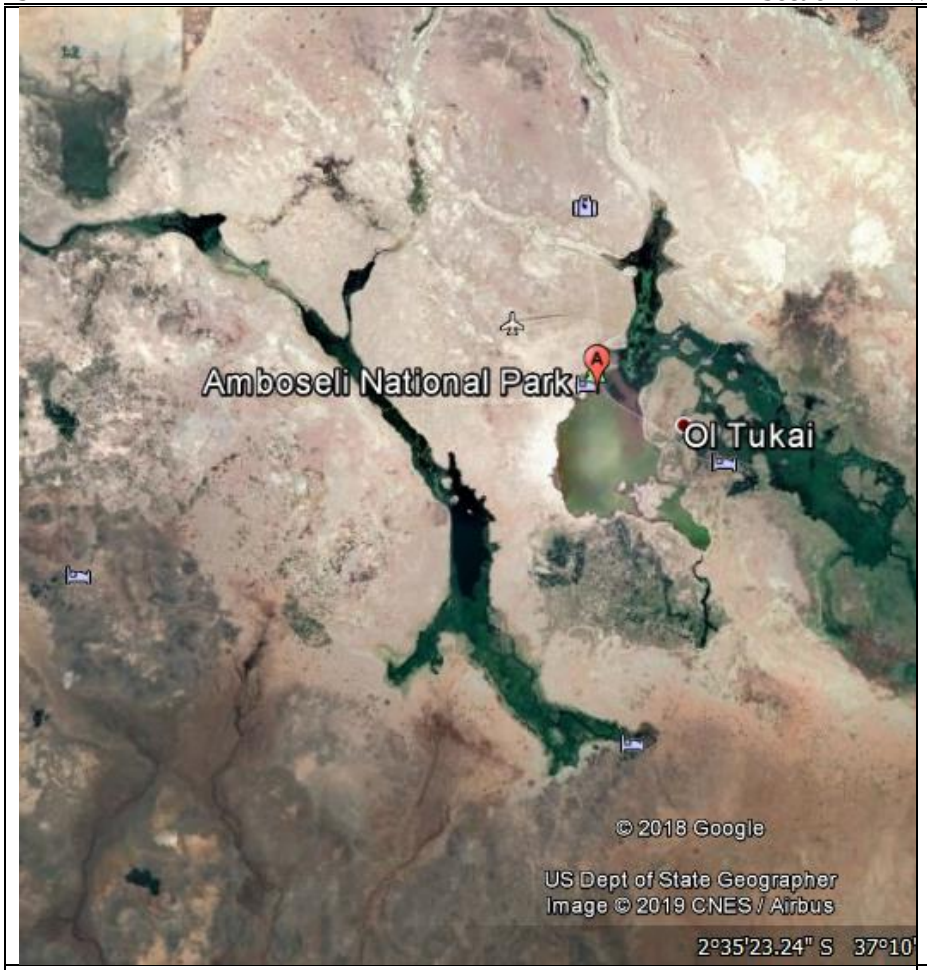


Fig. 69 - Amboseli National Park- Kajiado County

Fig. 70 - Makongo Forest-Makueni County

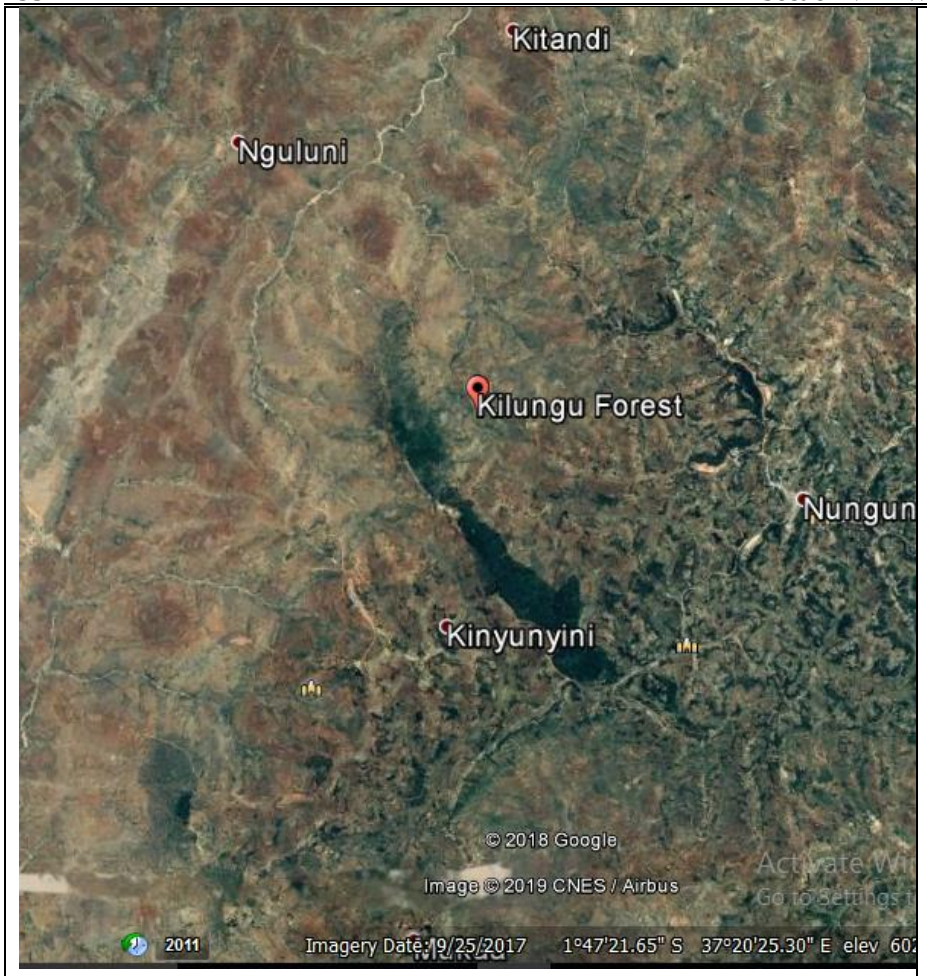


Fig. 71 - Kilungu Forest – Makueni

Fig. 72 - Chyulu Hills National Park- Makueni

Fig. 73 - Nuu forest –Kitui

Fig. 74 - Mumoni Forest

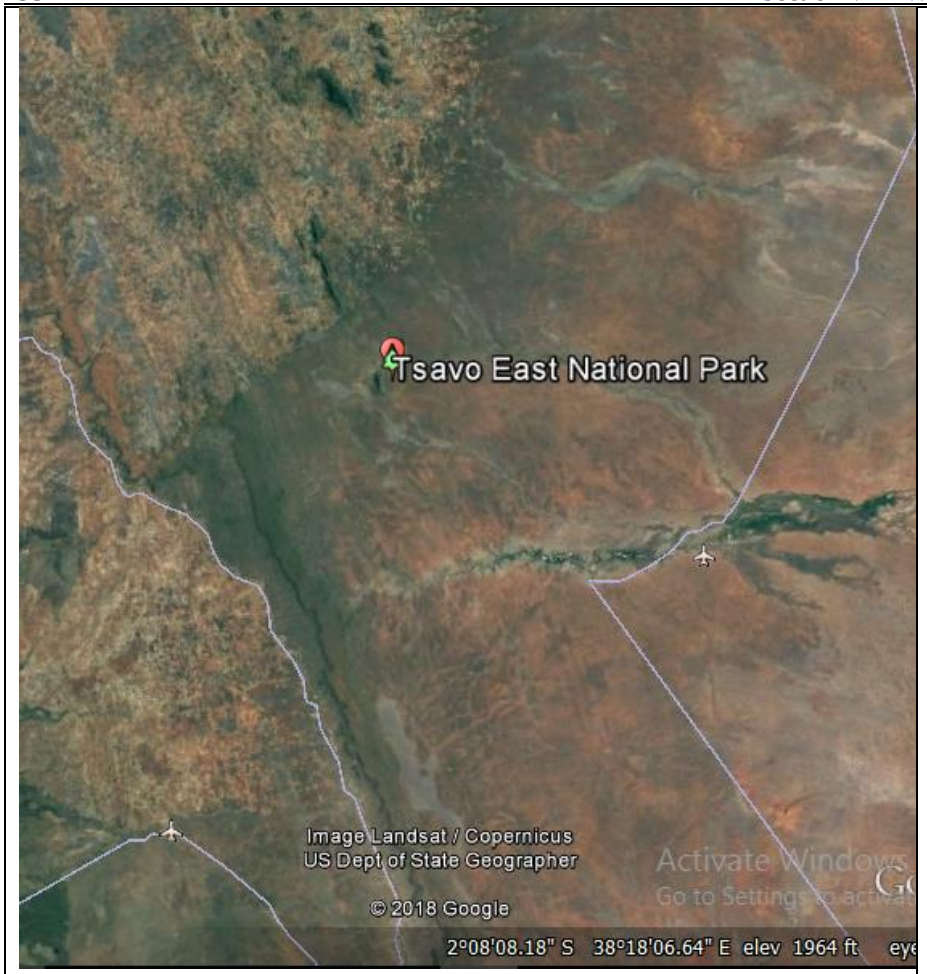


Fig. 75 - Tsavo east- Kitui

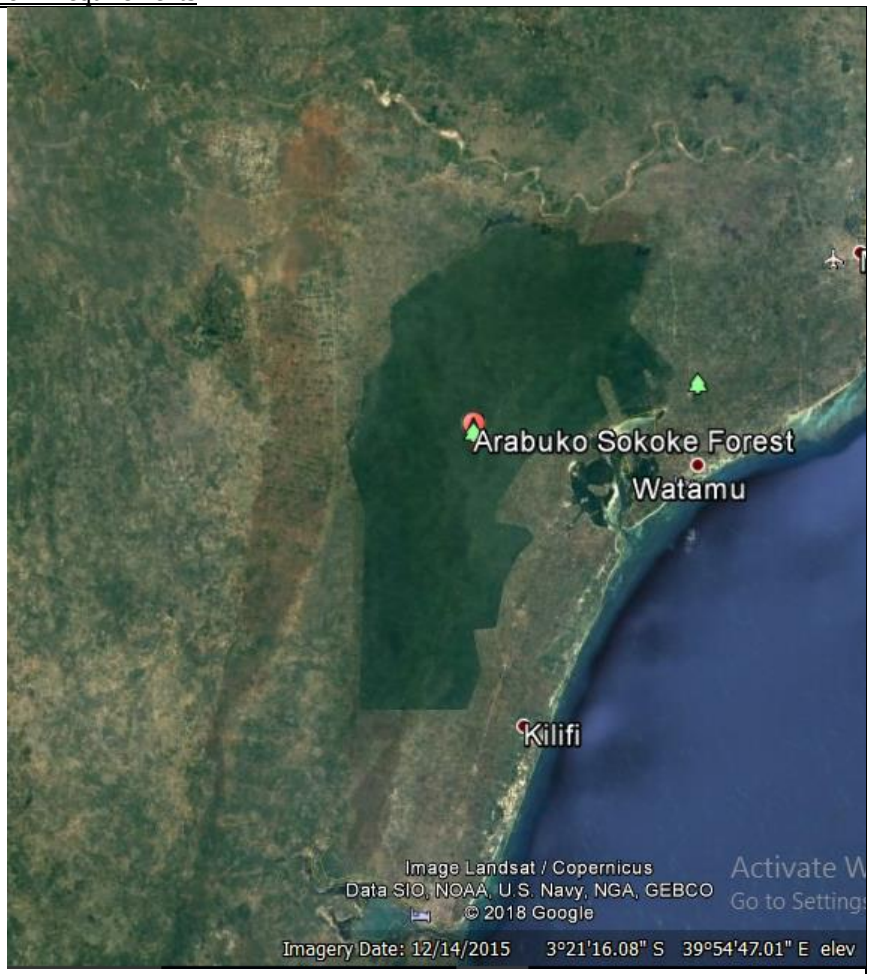


Fig. 76 - Arabuko Sokoke Forest- Kilifi County

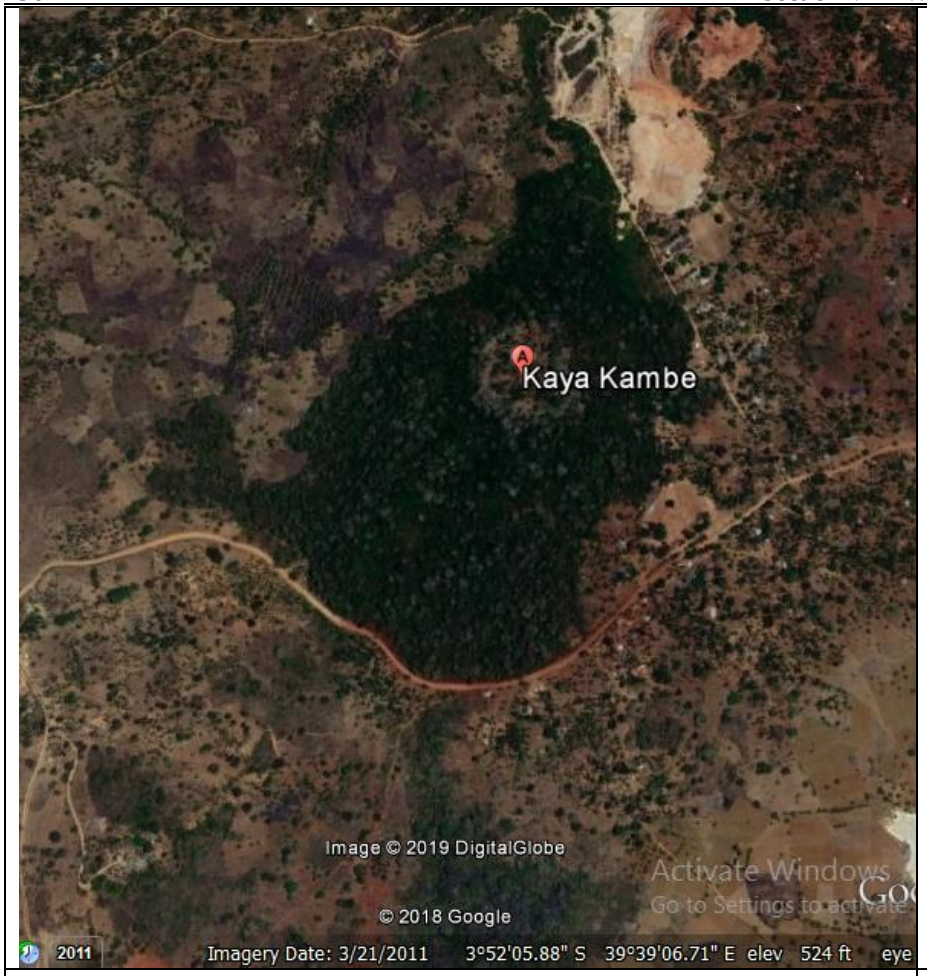


Fig. 77 - Kaya Shrines- Kilifi County

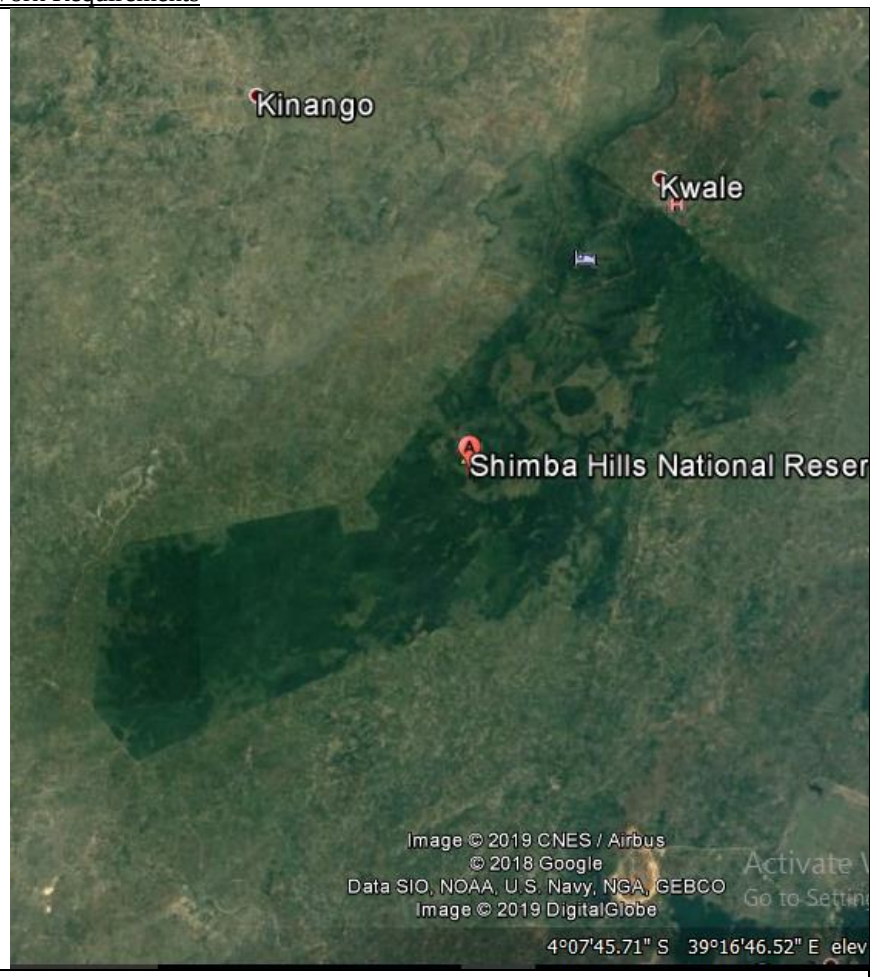


Fig. 78 - Shimba hills National Park- Kwale County

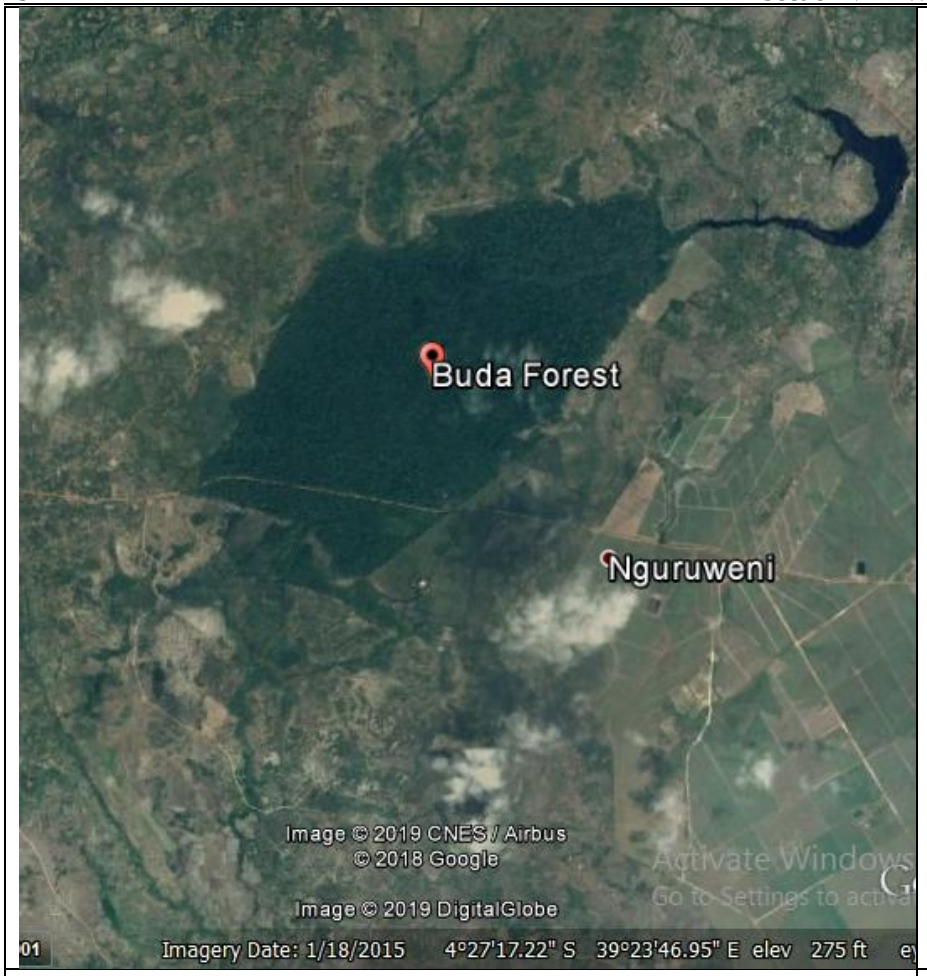


Fig. 79 - Buda Forest-Kwale County

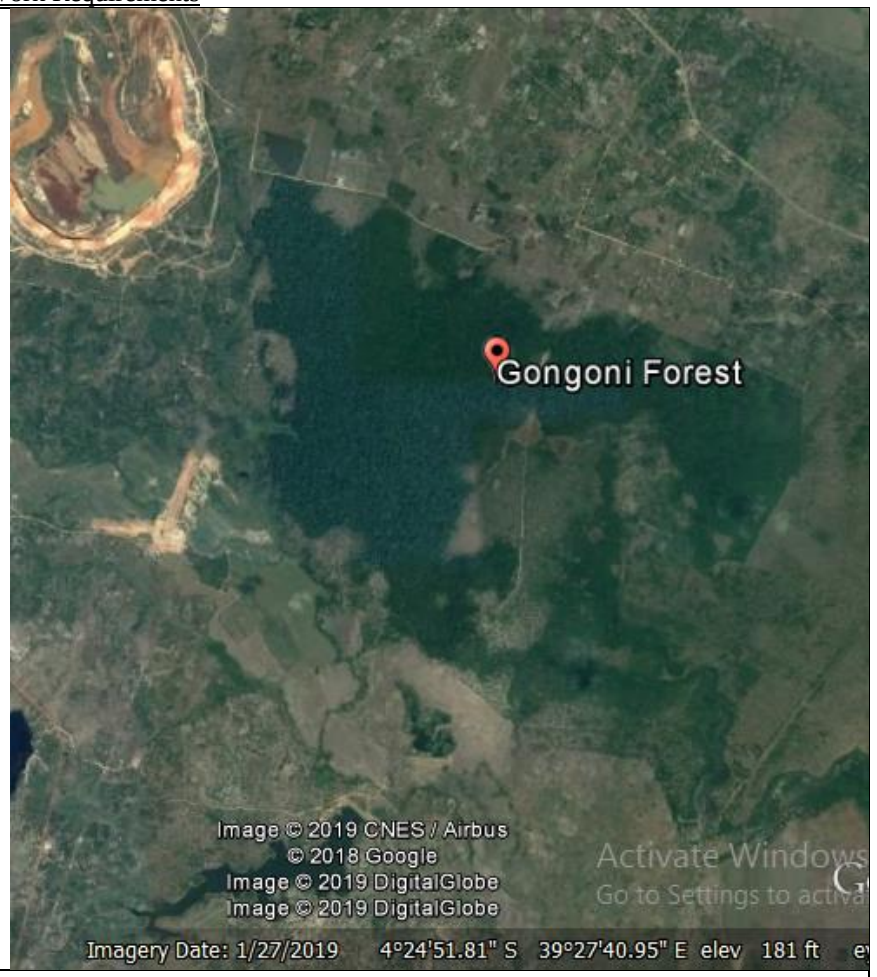


Fig. 80 - Gongoni Forest-Kwale County

Fig. 81 - Jombo Forest- Kwale County

Fig. 82 - Marenje forest- Kwale County

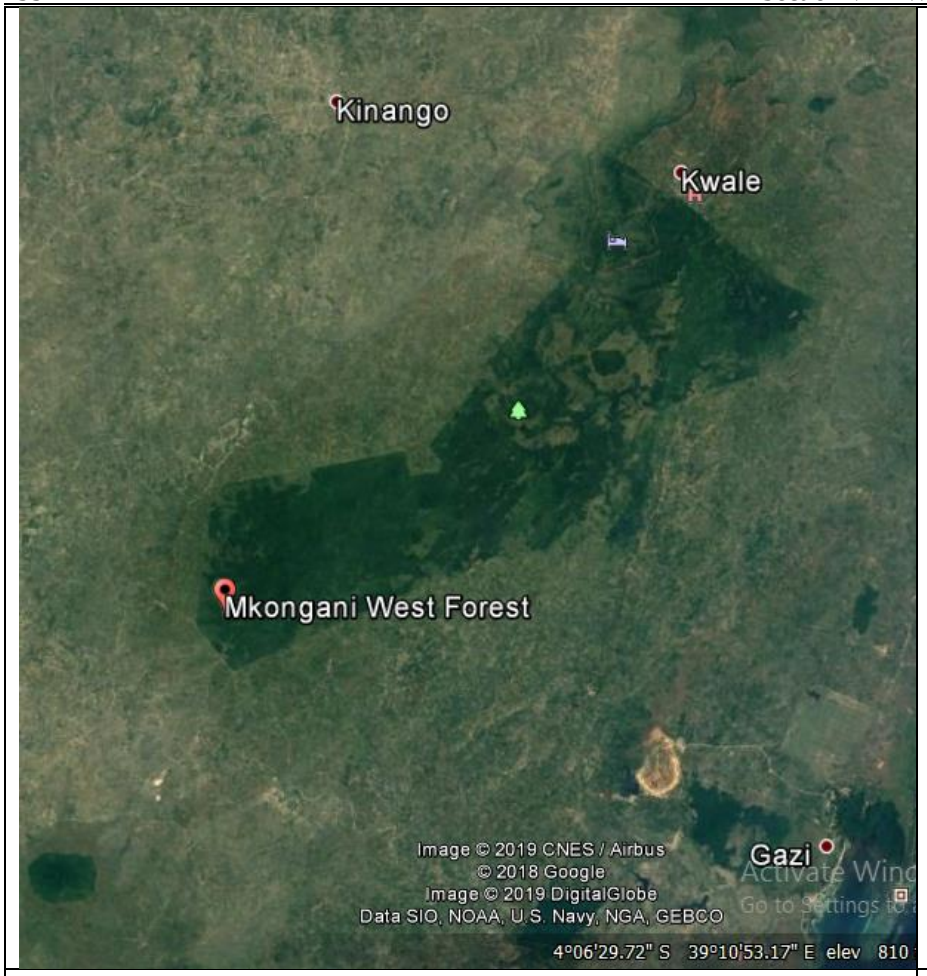


Fig. 83 - Mkongani forest-Kwale County

Fig. 84 - Tsavo West national park- Taita Taveta

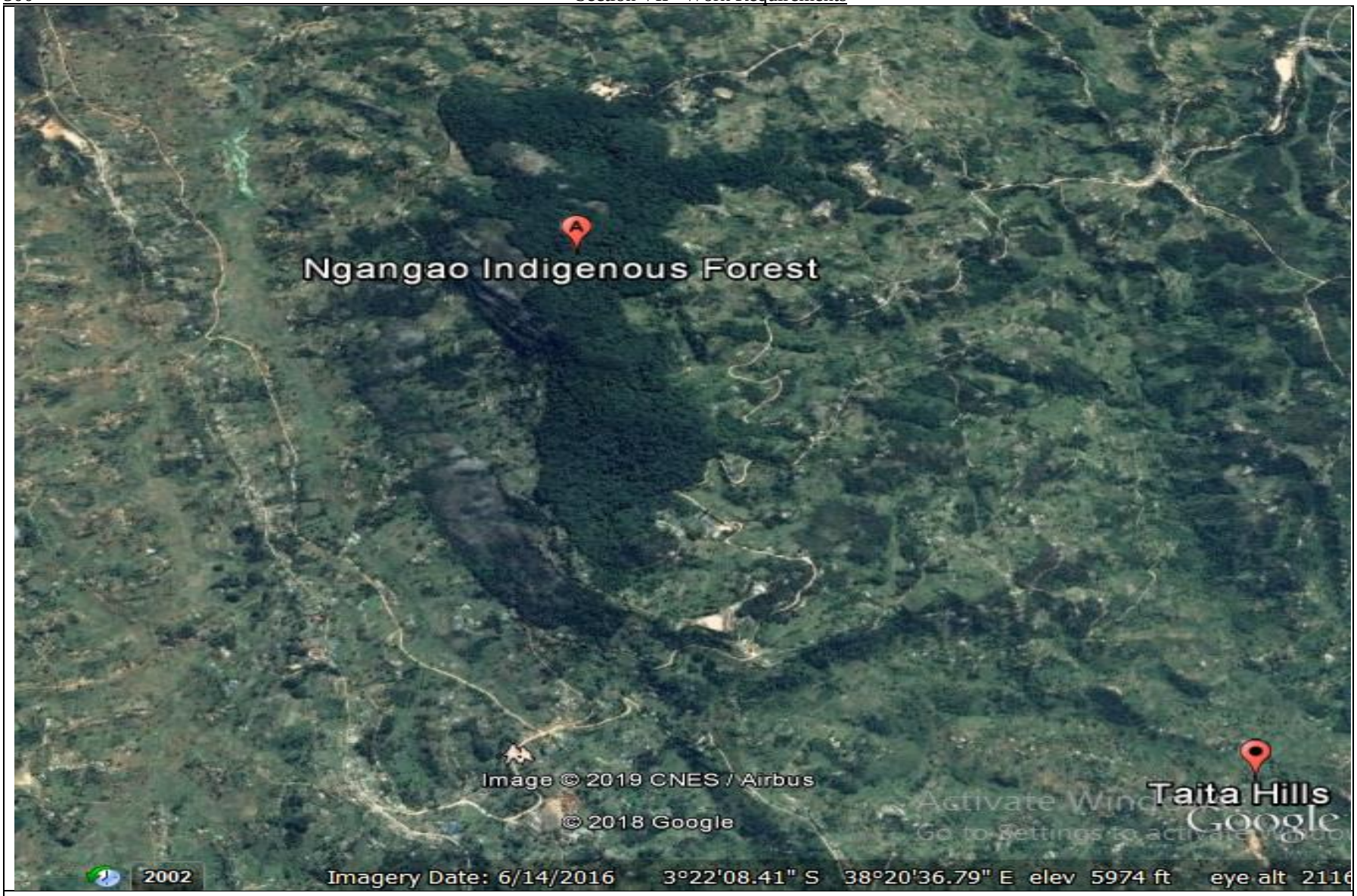


Fig. 85 - Ngangao Forest-Taita Taveta

6 CHAPTER SIX: GENERAL ENVIRONMENTAL, SOCIAL, HEALTH & SAFETY IMPACTS AND MITIGATION MEASURES

6.1 INTRODUCTION

The sub-projects described under AFD/EU/EIB Last Mile Connectivity Project Component on service connection and new low voltage transformer installation are aimed at reinforcing the system and increase capacity in order to have reliable power supply to newly connected customers. Purely connecting households to reliable power shall see into connection of more customers into the national grid and improving access to electricity as there shall be new transformers installed thus increasing power available within a given residential scheme.

Cumulative environmental impacts are not expected to be significant, as the project -although shall be undertaken in 32 Counties out of the existing 47 - is relatively limited in geographic scope and environmental impact. Induced impacts will be largely positive or benign - for example, decreased use of non-renewable energy, and improved economic welfare as a result of stable and reliable power supply.

6.2 criteria for project selection to minimize environmental, social, health and safety impacts

a) Proposed project construction will avoid or mitigate adverse impacts of the project on physical cultural resources, including ensuring government authorities responsible for the protection of cultural assets are notified and have the opportunity to document chance finds, etc. “Physical cultural resources” are the movable or immovable objects, sites, structures, groups of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance;
b) Proposed project construction will not be located within conservation areas, protected areas, sanctuaries, and forested areas as designated by Wildlife Conservation and Forest Departments;
c) Proposed project will not be located within a wetland or on a reservation of surface water bodies.
d) Potential environmental impacts associated with location will be minimized by selection of alternative sites;
e) All stages of the project screening, design and implementation will be done in a participatory manner with public consultation with potential affected persons;
f) Solid and liquid waste management facilities under the proposed project will not be sited adjacent to settlements; will not include treatment of hazardous waste. Waste oils can be recovered and recycled, either directly in the case of high oil content wastes, or after some form of separation and concentration from high aqueous content materials.
g) The disposal of Chromated Copper Arsenate (CCA) treated wood poles shall be subject to local regulation of disposal of Insecticides, Fungicides, and Rodenticides. In case the local regulations will not apply then the international regulations shall apply on the wood preservatives. Among other things, these rules require that wood which has been treated with CCA should not be burned in an outdoor fire or in stoves or fireplaces; rather, this wood should be buried in a non-hazardous waste landfill unless otherwise required by the law. This requirement was included to ensure that no toxic contaminants would be released as a result of the burning process.

6.3 Positive Environmental, Social, Health and Safety Impacts

a) Expected Impact on Poverty Alleviation

With the implementation of AFD/EU/EIB LMCP in proposed Counties, the power supply will be stable and reliable hence more customers will be connected to the system. The people under power supply will engage in income generating activities in order to improve their economic status.

b) Employment and wealth creation

The AFD/EU/EIB LMCP will have positive impact on both direct and indirect employment levels in the Country although the bulk of them will be on temporary basis during construction stage. The creation of job opportunities has both economic and social benefits. In the economic benefit, abundant unskilled labour will be used in economic production while the poor will engage in productive employment hence improving their living standards.

c) Local Material Supplies

Another positive impact of the project involves local material sourcing mainly sale of materials for use in the project. Some of these can be expected to be sourced locally and the rest through importation. It is expected that the project will generate new income revenues for the local population across the Country supply and transportation of concrete/wooden poles and gravel. The new income revenues received will create demand for other goods and services causing a trickledown effect to the entire economy.

d) Up Scaling Electricity Access

According to Kenya Power's annual report of 2012/2013, electricity access stood at 4.8milliom customers as at June 2016. This translates to about 60% of the total population accessing electricity. Needless to say, the uptake has been low due to the situation that the cost of connection has to be paid up front keeping in mind that about 46.6% of the Kenyan population is poor.

e) HIV/AIDS

Kenya Power's HIV/AIDs policy underscores the fact that HIV/AIDS has no cure and the only way to stop its spread is through attitudinal and behavioral changes as well as management that can be secured effectively through education (awareness and information campaigns). One of the positive impacts of this project will be disseminating of HIV/AIDs information to communities and workers who otherwise would not have had the correct information.

It is assumed that due to the current unstable state of the power system (frequent blackouts) many people are not able to get wide education or knowledge on HIV/AIDs through the TVs and radios. Once the system is reliable benefits will be high because people will be able to access HIV/AIDs information that is reliable and which comes from time to time as they can use the T.V and radios at will. People will also benefit from expert's opinion on the pandemic such as listening to doctors and nutritionists regarding HIV/AIDs.

The other method of disseminating HIV/AIDs information during project implementation will be through the contractors. The contactors will be expected to disseminate information to the workers as part of their daily tool box talks. SHE department will liaise with NACC to get materials (if they are available at the time) on HIV/AIDS that can be distributed by the contractors during the tool box talk. During the Environment Social Impact Assessment for other projects the Safety Health and Environment department will disseminates HIV/AIDs information to the public during public consultations meetings

f) Health benefits of the project

According to the 2009 population census access to electricity stood at 23%, while 31% used lantern lamps and 39% was using tin lamps for lighting. This indicates that 70% of the population was using kerosene for lighting. Although access to electricity has improved a majority of Kenyans are still using kerosene for lighting. This poses health problems as reported by World Bank report 2008 on the Welfare of Rural

Electrification. The report notes that kerosene lamps emit particles that cause air pollution; these are measured by the concentration of the smallest particles per cubic meter (PM10). Burning a litre of kerosene emits PM51 micrograms per hour, which is just above the World Health Organization 24-hour mean standard of PM10 of 50 micrograms per cubic meter. But these particles do not disperse, so burning a lamp for four hours can result in concentrations several times the World Health Organization standard. The health risks posed by this indoor air pollution mainly include acute lower respiratory infections, but also low birth weight, infant mortality, and pulmonary tuberculosis. Additionally, available data suggest that insufficient illumination (low light) conditions can cause some degree of eye strain, and reading in these conditions over long periods of time may have the potential to increase the development of near sightedness (myopia) in children and adults. The AFD/EU/AIB LMCP will result in many families replacing kerosene lamps for lighting with electricity there-by reducing disease burden at the family level and on the government.

g) Benefits to education

Access to constant and reliable electricity supply at the household level will create opportunities for children to study. For example, children from homes with electricity have an advantage because they have more time for study and doing homework in the evening as opposed to children from homes without electricity. This benefit will in the end translate to better results. Additionally, the project will enable children in these areas access reliable electricity also access T.V. and radios which gives them an advantage of benefiting from education programs being aired through such communication channels.

h) Improved standard of living

Access to stable and reliable electricity will change the standard of living of the people as they can use domestic appliances like iron boxes, fridges, television sets, washing machines to mention but a few. Use of electricity for lighting implies that the people will not be exposed to smoke arising from use of kerosene lamps which predisposes people to respiratory diseases.

i) Security

There will be enhanced security Country wide arising from well-lit social, commercial, individual premises and use of electrical surveillance gadgets that use broadband data services. With the implementation of the project, the level of security will improve across the county. This is as a result of more security lights which helps keep off opportunistic crimes and gender based violence.

j) Communications

Access to reliable electricity will lead to improved communication. This will be enabled by the fact that charging of mobile phones will be easier and cheaper. Access also to mass media like radio and T.V will provide opportunity for people to access a wide range of information which is useful for decision making. Some of information beneficiaries receive include: information on markets, farm inputs, livestock & crop management and local affairs, nutrition, diseases, investments and entertainment among others.

k) Gender Considerations

The vision of National Gender and Equality Commission is "A society that upholds gender equality, dignity and fairness for all". The Commission is guided by a mission "To effectively and efficiently promote gender equality and freedom from discrimination of all persons in Kenya". KPLC Gender mainstreaming policies is in line with the NGEG Vision and Mission. The company's gender vision is a world class power provider that is free from inequality and discrimination. The gender mission is promoting gender equality in powering people for better lives. The gender policy of Kenya Power is to mainstream gender within the

company's procedures, management and monitoring and evaluation processes for the equal benefit of men and women.

Access to modern electricity will go a long way towards alleviating the daily household burdens of women, giving them more time, improving their health and enhancing their livelihoods. Available literature on gender and energy suggests that providing electricity to communities and homes will promote gender equality, women empowerment, and women's and girls' access to education, health care, and employment.

Lighting and television will improve access to information, the ability to study, and extend the effective working day. This is more so because children can have extended time of study. The women will also benefit more due to access of information especially on health and nutrition since they also spend more time at home. The project will also enhance security in the rural areas as most homes will be lit up, a benefit that is more appreciated by women.

6.4 Negative Environmental, Social, Health and Safety Impacts

Despite the various socio economic and environmental benefits outlined, the project will also have some negative impacts. In regard to the proposed KPLC projects, potential adverse environmental and social impacts on the natural and human environment are likely to arise from inputs as well as project processes at the construction and operation and maintenance phases. The following are the foreseen negative impacts.

a) Impact on Natural flora and fauna

The construction of distribution lines together with installation of new transformers will involve minor pruning of trees especially those along way leaves or road reserves. The wayleave trace for 33 and 11 KV lines is 5 meters from the centre of the pole and these lines are mostly routed along road reserves. In the unlikely event that the lines are routed through private land and trees are affected, KPLC will compensate. Exposed soil surfaces have the potential to erode easily if left uncovered which could lead to further loss of vegetation. Further vegetation / habitat loss may result due to the creation of temporary access routes during construction. There is also the potential for injury or death to animals accessing the site as a result of tripping into uncovered pole holes.

b) Impacts on air quality from vehicle exhaust emissions

The main source of the exhaust emissions is likely to be generated during use of fuel-run equipment including vehicles, generators, and compressors. Oxides of nitrogen, carbon monoxide and oxides of Sulphur emitted from internal combustion engines will be released during construction. Motor vehicles that will be used to ferry construction materials would cause air quality impact by emitting pollutants through exhaust emissions.

c) Dust emissions

Dust emission is likely to occur during the site clearance, excavation and spreading of the topsoil during construction. They are also likely to occur during materials transportation by motor vehicles accessing the site.

d) Solid waste

The solid wastes in construction will include conductor off cuts, material packaging and tree cuttings. For the civil works during stringing of lines and for the electrification of households in slums, key factors are to ensure that appropriate safety guidelines are adopted, and that obsolete equipment and construction waste is disposed of in an environmentally sustainable manner.

Inappropriate dumping within the site will interfere with the aesthetic status of the area. This has a direct effect to the surrounding community. Disposal of the same solid wastes off-site could also be a social inconvenience if done in the wrong places. The off-site effects could be aesthetic, pest breeding, pollution of physical environment, invasion of scavengers and informal recycling communities.

e) Occupational safety and health hazards

The development of the proposed projects will involve a number of activities that pose potential health and safety risks to the workers which include, excavation, stripping, laying of cables stringing conductors and backfilling. Risk of accidents and incidents will be heightened with the construction activities. Construction workers will be in direct contact with heavy machinery and equipment. These operations require the use of hoists, heavy duty equipment, machinery and vehicles. Apart from the regular training on health and safety, staff working along the transmission and distribution lines should be sensitized on the work within the varying ecological and social areas traversed.

Health, safety and security are important aspects through all the stages of the project. Occupational health and Safety hazards specific to electric power transmission and distribution projects primarily include:

- Live power lines;
- Working on heights
- Public health and Safety.

The potential occupational health and safety impacts during operation phase include injuries to workers from routine monitoring and maintenance and public and animal deaths due to electrocutions.

f) Social Risks Related to Labour Influx

At project implementation, many new workers will be involved and new interactions between local communities and workers undertaking the construction and installation of substations and power lines will take place. These interactions are likely to pose risks to the social fabric of the society. Such risks include public health related issues such as (HIV/AIDS, communicable and sexually transmitted diseases (STDs). Other social risks include; Risks of social conflict between communities/clans and within the workforce; increased illicit behaviour and crime such as substance abuse and theft; prostitution; gender-based violence; underage pregnancies; child labour and school dropouts.

g) Increased Demand for Material Consumption

During the construction phase of the project water, energy and construction materials will be used. This will have an impact on the availability of these materials.

h) Oil Spill Hazards

The machines at site and subproject vehicles require oils during maintenance. The oils will be transported and may be stored at project sites. Any major accidental oil spill would impact negatively on the environment as a whole. Cumulatively, small releases of oil would also impact negatively on the environment. Such impacts include creation of new sceneries due to destruction of biological diversity and pollution of water and soil. But these dangers are contained by maintaining the machinery in specific areas designed for this purpose.

Transformers can experience a leak arising from a fault, poor handling and vandalism. These leaks may result in potential contamination of surface and groundwater as well as soil.

i) Noise during construction

Noise and vibrations will occur during transportation and installation of equipment. During the construction phase construction vehicles and trucks may produce a noticeable increase in noise disturbance. Construction vehicles may create some noise and vibration along access routes. Construction workers may also contribute to noise pollution.

j) Visual and Aesthetic Landscape Impacts

Visual impacts will occur when changes in the landscape are noticeable to viewers observing the landscape from their homes or from tourism / conservation areas, travel routes, and important cultural features. This may result from construction of distribution lines.

6.5 Mitigation Measures To Be Implemented

a) Introduction

Mitigation measures involve avoiding of impact altogether, minimizing the impact, rectifying the impact and gradual elimination of impact over time. Mitigation measures are three: physical, socio-cultural and socio-economic. Physical measures relate to issues of project siting, re-vegetation and preventive measures to minimize bush clearing, erosion, sedimentation and pollution control and good construction /engineering design practices, waste management, and application of Environmental Guidelines for Contractors. Socio-economic measures will include education and awareness, hygiene and sanitation training, rules and regulations, institutional support (including skills training), and recruitment of qualified personnel while socio-cultural measures could include allowing limited and monitored access to restricted areas for cultural reasons where applicable.

The mitigation measures for the public health issues; explore options to accommodate crew off site and avoid camps and in absence of that, educate the crew about preserving vegetation, provide decent temporary sanitation facilities like toilets. Use local and regional labour as much as possible and provide HIV/AIDS awareness training to the workers and the community, provide guidelines on local culture, behavior and social life to the workers and create walk ways and plant grass where necessary.
The mitigation measures for use of hazardous waste include; use off site treatment methods and only deliver poles ready for fixing, proper burning or disposal of any hazardous materials found on site, use protective gear during work, remove or bury all abandoned construction materials and rubbles and fill in and close all latrines and septic systems. The mitigation measures for use of heavy plant and equipment i.e. tippers for material delivery include; Minimize the use of heavy trucks, Provision of drainage channels to guide surface run offs and introduction of mulching to minimize effects on soil erosion and set protocols for vehicle maintenance on site and not dump any oil around the site.

A summary of potential environmental and social impacts and the corresponding general mitigation measures for the types of activities likely to be undertaken by KPLC during the implementation of AFD/EU/EIB LMCP are as shown in Table below. The tables are not intended to be exhaustive in content but rather to indicate in general the scope of ESMPs. It is entirely possible that additional impacts will be identified during screening process and will require additional mitigation measures. In the ESMPs, impacts shall be categorized according to project phase (planning, design and construction) and for all project types.

b) ENVIRONMENTALLY SENSITIVE ECOSYSTEMS, RISKS AND MITIGATION MEASURES ACROSS THE 32 COUNTIES

SENSITIVE ECOSYSTEMS FOR AFD/EU LOT 1

No.	County	Land Types/Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
1.	Nandi	King'wal Swamp	Cutting down of tree cover	Low (There could be likelihood of lines crossing or being in proximity to swampy areas)	Clear only necessary vegetation	Contractor
			Damage to crops and trees		Compensate	KPLC
			Electrocution of migratory birds		Use insulated conductors	Contractor
			Falling of energized power lines on the wetland		Avoid Wetlands, Use concrete poles	Contractor
			Soggy grounds		Avoid Soggy grounds, Use concrete poles	Contractor
		River Kesses River Mokong	Falling of poles	Low (There could be likelihood of lines crossing or being in proximity to rivers)	Site the poles on stable grounds for ease of access and stable installation	Contractor
			Rugged terrains			
2.	Uasin Gishu	Planted and natural forest covers i.e. Nabkoi, Timboroa, Sangalo, Lorenge, Kipkurere and Kapsaret	Cutting down of trees Electrocution during pruning of branches	Nil (gazetted forests not settled)	Avoid gazetted forests	Contractor
		River Moiben and its 3 tributaries	Falling of poles thus electrocution caused by	Low (There could be likelihood of lines	Route the lines on stable grounds away from river buffers	Contractor

No.	County	Land Types/Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		River Sosiani with its 3 tributaries River Sergoit with 2 tributaries River Kipkaren with 9 tributaries River Nzoia	energized lines Electrocution of bird species that are indigenous to the area Soggy grounds	crossing or being in proximity to rivers)	Consult local communities and relevant authorities to ensure that areas chosen for routing lines are not habitats for indigenous bird species	
3.	Trans Nzoia	Cherengany Hills catchment Mt Elgon Catchment	Bird electrocution Cutting of trees	Nil (gazetted forests not settled)	Do not route the power lines across or adjacent to the catchment areas as they are internationally recognized important bird areas and have been gazette Mt Elgon and Cherengany hills have dual are also gazetted as a national park and conservancy respectively thus minimizing human impacts on the environments. As such line construction should not be done within the areas The Mt Elgon and Cherengany hills ecosystems are	Contractor

No.	County	Land Types/Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					home to indigenous tree species that take long to grow when cut this construction of the lines should aim at preserving the environment in its natural state.	
		River Nzoia and River Suam	Falling of poles Rugged terrains Electrocution from fallen energized lines	Low (There could be likelihood of lines crossing or being in proximity to rivers)	Being the main perennial rivers flowing through the county into Lake Victoria and Lake Turkana respectively, their ecosystems provide suitable breeding grounds for wildlife thus construction of electric lines within such ecosystems will interfere with the habitats, thus the lines need to be constructed on safer environments upon consultation with local communities and relevant	

No.	County	Land Types/Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					authorities to ensure the development do not interfere with natural wildlife habitats.	
			Electrocution of birds		Where areas traversed by lines are known or considered flight paths then the lines have to be insulated appropriately	
4.	Bungoma	River Sio and Lwakhakha-Malaba-Malakisi River	Birds electrocution Soggy grounds Falling poles	Low (There could be likelihood of lines crossing or being in proximity to rivers)	After consultation with local communities route the lines on suitable environment away from birds' habitat and on stable grounds to minimize chances of poles falling.	Contractor
			Cutting of trees		Avoid areas with dense vegetation covers especially with indigenous tree species	
5.	West Pokot	River Suam River Weiwei River Kerio and River Muruny	Rugged terrain Soggy grounds Falling poles Top soil erosion	Low (There could be likelihood of lines crossing or being in	Consider routing the lines on gently sloping terrains for stability of lines and	Contractor

No.	County	Land Types/Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
				proximity to rivers)	minimal soil erosion	
		Cherengany Hills to the southern side	Rugged Terrains		Route the lines on gently sloping terrains	
			Cutting of trees		The routes considered for establishment of lines should be along areas with minimal vegetation covers especially of indigenous tree species	
			Electrocution of birds		Insulate lines especially along the birds flight routes	

SENSITIVE ECOSYSTEMS IN AFD/EU LOT 2

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
1	Kisumu	Railway Forest	Cutting of trees. Not within Project footprint	Nil (Protected area).	Avoid Protected areas.	Contractor
		Kisumu Impala Sanctuary, Ruma National Park	Animal electrocution	Nil (Protected area).	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions	
		Lake Victoria, River Nyando	Soggy ground, bird electrocution	Low (There could be likelihood of lines crossing rivers)	Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor
2	Siaya	River Yala, Yala swamp, Lake Kayabol	soggy ground, bird electrocution	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor
		Got Ramogi Forest	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash	Nil (Protected area).	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
			ways. Not within Project footprint		knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas. Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	
3	Vihiga	Kaimosi Forest	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Nil (Protected area).	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas. Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					insulated or all conductors be insulated	
		Isara River, Musikolo River, River Wandende, River Wasundi	falling of poles causing electrocutions	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	do not site poles and power lines on the riparian lands, Use insulated cables to avoid bird electrocution	Contractor
4	Kakamega	Kakamega Forest National Reserve	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Nil (gazetted forests not settled)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas. Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor
		Isiukhu river	falling of poles causing electrocutions	Low (There could be likelihood of lines crossing rivers and in	do not site poles and power lines on the riparian lands, Use insulated cables	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
				proximity to swamps)	to avoid bird electrocution	
5	Busia	River Malaba, River Nzoia, River Sio, Nabubolu stream, River Manyanja	soggy ground, bird electrocution	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Use Concrete poles, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all conductors be insulated	Contractor

SENSITIVE ECOSYSTEMS FOR AFD/EU LOT 3

No.	County	Land types/ Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
1	**Homabay and Migori**	Nyando River Delta	Falling power lines due to Soggy grounds	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Use Concrete poles, avoid swampy areas	Contractor
			Corrosion		Ensure all metallic parts are anti-corrosive	Contractor
			Risk of flash floods		Take precaution if working in flood prone areas, don't site poles along flood prone areas	Contractor
		Lake Victoria	Falling power lines due to Soggy grounds	Low (There could be a likelihood of lines being in proximity to	Use Concrete poles, avoid swampy areas	Contractor
			Corrosion		Ensure all metallic parts	Contractor

No.	County	Land types/ Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
				the lakeshores)	are anti-corrosive	
			Risk of flash floods		Take precaution if working in flood prone areas, don't site poles along flood prone areas	Contractor
		Forested areas	Tree cutting	Low (Sparse settlements near forested areas)	Avoid forested areas.	Contractor
			Forest Fires		Avoid careless handling of open fires.	Contractor
			Bird Electrocutions		Use insulated cables in habitats with brown crested cranes	Contractor
		Hills: Maeta, Magaimuya and Taragwiti Hills	Falling lines due to Steep landscape, unstable grounds and soil erosion	Low (Sparse settlements near the hills)	Protected areas not settled, in steep landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor
		Islands: Ngodhe and Takawiri	Noise pollution due to use of Compressors in Rocky landscape	Nil (Not within the grid network)	Not within the grid network	Contractor
		Bala Hot Springs	Burns due to Eruptions and risk of falling lines due to wet grounds	Nil (Area not settled)	Complete avoidance Bala hot springs areas	Contractor
		Cultural Shrines: Mawanga and Kwitone Rock Art	Threat to preservation of cultural heritage		Avoid cultural places	Contractor

No.	County	Land types/ Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
2	**Kisii and Nyamira**	Sironga Wetland	Falling power lines due to Soggy grounds	Low (There could be likelihood of lines crossing or being in proximity to swampy areas)	Use Concrete poles, avoid swampy areas	Contractor
			Corrosion		Ensure all metallic parts are anti-corrosive	Contractor
			Risk of flash floods		Take precaution if working in flood prone areas, don't site poles along flood prone areas	Contractor
		Nyangweta Forest	Tree cutting	Nil (gazetted forests not settled)	Avoid forested areas.	Contractor
			Forest Fires		Avoid careless handling of open fires.	Contractor
		Hills: Sameta, Taracha, Nyacheki, Nyangweta, Kiong'anyo Kiabonyoru, Nyabisimba, Nkoora, Kemasare and Manga.	Risk of falling lines due to unstable grounds on Steep landscape	Low (Sparse settlements near the hills)	Protected areas not settled, in steep landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor
		Manga ridges	Risk of falling lines due to unstable grounds on Steep landscape	Low (Sparse settlements near the hills)	Protected areas not settled, in steep landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor

No.	County	Land types/ Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		River Gucha catchment (Kiabonyoru)	Falling power lines due to Soggy grounds	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Use Concrete poles, avoid swampy areas	Contractor
3	**Bomet**	Mara River Basin	Falling power lines due to Soggy grounds	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Use Concrete poles, avoid swampy areas	Contractor
			Corrosion		Ensure all metallic parts are anti-corrosive	Contractor
		Mau Forest	Tree cutting	Nil (gazetted forests not settled)	Avoid forested areas.	Contractor
			Forest Fires		Avoid careless handling of open fires.	Contractor
		Motigo Hills	Steep landscape	Low (Sparse settlements near the hills)	Protected areas not settled, in steep landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor

SENSITIVE ECOSYSTEMS IN AFD/EU LOT 4

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
1	Narok	Mau Forest, Olposimoru and Transmara Forests	Cutting down of trees	Nil (gazetted forests not settled)	Do not connect people residing illegally in the forest	Contractor
		Mara River, Ewaso Nyiro River	Falling of poles causing electrocutions	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Do not site poles and power lines on the riparian lands, Use insulated cables to avoid bird electrocution	Contractor
		Maasai Mara Game Reserve	Animal electrocution	Nil (Not within the project scope area)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	Contractor
2	Nyandarua	Aberdare Forest, Ol Bolosat, Magumu North, Magumu South, Muruai, Kirima Forests	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Nil (gazetted forests not settled)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas. Use Concrete poles in soggy grounds, Ensure designs of power lines provide spacing of more than 2 meters between phases or the middle conductor to be insulated or all	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					conductors be insulated	
		lake Ol Bolosat, Ewaso Nyiro River, Malewa River	Soggy grounds leading to rotting of poles, risk of bird electrocution,	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Use Concrete poles, Use insulated conductors	Contractor
		Aberdare Ranges	Rugged landscape	Low (Sparse population at the edges)	Protected area not settled.	
3	Nakuru	Lakes: Nakuru, Naivasha and Elementaita.	soggy ground, bird electrocution,	Low (Sparse population near the lake shores)	Use Concrete poles, Use insulated conductors	Contractor
		Lake Nakuru National Park, Hells Gate National Park	Human-wildlife conflict, Struggling and Electrocution of giraffes in dispersal areas	Nil (Area not settled)	Protected area not settled. In dispersal areas settled, any power lines should be straight to reduce stays and use insulated conductors	Contractor
		Forests: Eburu Forest, Bahati, Eastern Mau, Eburu, Eastern Mau, Kijabe Hill, Mau Narok, Menengai, West Molo	cutting down of trees	Nil (gazetted forests not settled)	Protected areas not settled. Any illegal inhabitants should not be connected to the grid.	Contractor
		Hills: Hyrax Hills and Ndiuni Hills	Rugged landscape	Low (Sparse population near the foot of the hills)	Site poles in stable grounds, apply soil erosion reduction measures	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Swamps: Barina Swamp	Soggy ground, bird electrocution	Low (There could be likelihood of lines crossing or being in proximity to swampy areas)	avoid constructing power lines on swamps. If absolutely necessary use extra-long concrete poles to increase pole spacing and use insulated conductors	Contractor
4	Laikipia	**Forests**: Mukogodo, Lariak, Marmanet, Ng'arua, Rumuruti and Shamaneik	Tree cutting to allow for power line wayleave, Trees falling on the power lines , Electrocution of wild animals	Low (Sparse population proximal to forested areas)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Contractor
		Rivers: Ewaso Narok (Ngare Naro), Narumoru, Likii, Sirimon, Ontulili, Ngare Ndare, Melwa, Ngare Nything, Ngobit, Rongai, Timau, Moyak, Pesi, Suguroi, Mutara, Nanyuki, and Burguret Rivers.	Falling of power lines due to loose soil	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Site the poles away from the riparian reserve	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
5	Nyeri	**Forests**: Aberdare Ranges, **Mt. Kenya**, Karima Hill, Tumutumu Hill, Gachirichiri, Wagere, Karundu, Karindi, Thangathi, Ngamwa Hilltop and Gachuthe	NOT within the project footprint since they are protected areas and considered sacred by the locals	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Contactor
6	Kericho	**Mau Forest** -it is inhabited by a minority group called the Ogiek who are hunters/ gatherers. Also Tindiret Forest and Londiani Forest	Tree cutting to allow for power line wayleave, Trees falling on the power lines, Electrocutions	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Contactor
		Rivers: Chemosit, Mara Mara, Itare, Kipsonoi and Timbilil	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Avoid the riparian reserves	Contractor

SENSITIVE ECOSYSTEMS IN AFD/EU LOT 5

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
6.	Meru	**Lake** Nkunga-within Imenti Forest and surrounded by	NOT within the project footprint since they are	Nil (Protected area not settled)	The power lines should be	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		natural springs. Also Lake Ellis	protected area and considered sacred by the locals		out of this ecosystem	
		Swamps/ Wetlands: Mbutubutia (Tigania West), Baisigiria (Buuri), Ithindi (Igembe Central), Mporoko (Igembe South), Rurie (Imenti Central)	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing or being in proximity to swampy areas)	Erect electricity poles outside the swamps and the wetlands	Contractor
		Rivers: Kathita, Mariara, Thingithu, Kithino, Ura, Thangatha, Mutonga, Thanantu, Iraru, Rujiweru, Kathangatha	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Put the power lines out of the riparian reserve	Contractor
		Forests: Tamani Forest, Kirimachuma forest, Nguthiru Laingo Forest, **Mt Kenya Forest**, Nyambene Forest and Imenti Forest	NOT within the project footprint since they are protected forests	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Contractor
		Rivers: Sagana, Nyamindi, Rupingazi, Thiba, Rwamuthambi and Ragati, which ultimately drain	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swamps)	Put the power lines out of the riparian reserve	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		into the Tana River.				
		River Mathioya	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Put the power lines out of the riparian reserve	Contractor
7.	Kirinyaga	**Forests**: **Mt. Kenya**, Njukiini West, Murinduku, Kariani, Kamaruana, Karimandu and Kerugoya Urban forest	NOT within the project footprint since they are protected forests	Nil (gazetted forests not settled)	The power lines should avoid forests.	Contractor
		Rivers: Sagana, Nyamindi, Rupingazi, Thiba, Rwamuthambi and Ragati, which ultimately drain into the Tana River.	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Put the power lines out of the riparian reserve	Contractor
		River Mathioya	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Put the power lines out of the riparian reserve	Contractor
8.	Murang'a	**Forests**: Gatare, Karua, Kimakia, Kiambicho and Wanjerere	Tree cutting to allow for power line wayleave, Trees falling on the power lines , Electrocution	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests,	Contractor

No.	County	Land types/Sensitive ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
			of wild animals		insulated power lines will be used	
		River Mathioya	Soggy grounds can lead to falling of power lines	Low (There could be likelihood of lines crossing rivers and in proximity to swampy areas)	Put the power lines out of the riparian reserve	Contractor
9.	Tharaka Nithi	**Forests:** Mt. Kenya, Chogoria and Chuka Forest station	NOT within the project footprint since they are protected area and considered sacred by the locals	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Contractor
10.	Embu	**Forests**: Mulinduko, Maranga	Tree cutting to allow for power line wayleave, Trees falling on the power lines, Electrocution of wild animals	Nil (gazetted forests not settled)	The power lines should avoid forests. When it is not possible to avoid forests, insulated power lines will be used.	Kenya power

SENSITIVE ECOSYSTEMS IN AFD/EU LOT 6

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
1	Kajiado	Lake Magadi	Soggy grounds	Low (Sparse	Use Concrete poles	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
			Corrosion	population around the lake shores)	Ensure cross arms are anti-corrosive	Contractor
			Birds Electrocution		Use insulated cables	Contractor
			Risk of flash floods		Take precaution if working in flood prone areas, don't site poles along flood prone areas	Contractor
		Ngong Hills	Rugged landscape	Low (sparse population at the foot of the hills)	Protected areas not settled, in Rugged landscapes site poles on stable grounds and apply measures to reduce soil erosion	Contractor
		Ngong Forest Sanctuary	Tree cutting	Nil (gazetted forests not settled)	Protected area not settled, Preserve Sanctuary	Contractor
		Ngurumani Escarpment	Rugged landscape and rivers	Nil (gazetted area not settled)	Greater part is Protected area and not settled. At the foot of the escarpment, site poles away from the riparian zones	Contractor
		Amboseli National Park	Human-Wild life conflict, Electrocutions and struggling of giraffes	Nil (gazetted area not settled)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	
2	Makueni	Makongo Forest	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Low (sparse settlements proximal to the forest edges)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability. Install erosion reduction measures to poles erected in such hilly areas.	Contractor
		Kilungu forest	Rugged landscapes, meandering roads and risk of power lines toppling due to landslides, and wash ways. Not within Project footprint	Low (sparse settlements proximal to the forest edges)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					formations and stability. Install erosion reduction measures to poles erected in such hilly areas.	
		Chyulu hills National Park	Not within Project footprint	Nil (gazetted area not settled)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions. .	Not Applicable
		Amboseli National Park	Not within Project footprint	Nil (gazetted area not settled)	Protected areas not settled, Other areas with human habitation ensure consultations to gather indigenous knowledge on land formations and stability.	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					Install erosion reduction measures to poles erected in such hilly areas.	
3	Kitui	Nuu Forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Endau Forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Gaikuyu Forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Mumoni forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Tsavo East	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
4	Kilifi	Arabuko Sokoke Forest	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Kaya Shrines	Not within Project footprint	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Dakacha Woodlands	Not within Project footprint	Nil (gazetted area not settled)	It is home to Clavers Weaverbird and Sokoke Pipit birds which are small and not endangered and which power lines don't pose a threat.	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
					Contractor not to interfere with the forest.	
		mangrove forests along the coast line	Not within Project footprint	Nil (gazetted area not settled)	Mangroves flourish along sea shores in marshy areas not settled. The contractor and staff should however not interfere with mangrove forests.	Contractor
5	Kwale	Shimba hills National park		Nil (gazetted area not settled)	Any line extension falling within the National park should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	Contractor
		Buda Forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Gogoni Forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Gonia forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Jombo forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Mailunganji forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Marenji forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
		Mkongani forest	Not within project footprint.	Nil (gazetted area not settled)	Protected area not settled	Not Applicable
6	Taita Taveta	Tsavo West National Park	Not within project footprint.	Nil (gazetted area not settled)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
		Taita Taveta Wildlife Sanctuary	Protected area, Not within project footprint.	Nil (gazetted area not settled)	For any line extensions falling within wildlife dispersal area, Contractor should ensure straight formation to reduce the number of stays which are a potential cause of deaths to giraffes. Increase the height of poles in giraffe manifested areas to minimize potential for electrocutions.	Contractor
		Mwandongo Forest	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Ngangao forest	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Kasigau Forest	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Kinyesha Mvua	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Irizi	Risk of tree cutting	Nil (gazetted area not settled)	Avoid Gazetted forests	Contractor
		Muraru	Risk of tree cutting	Nil (gazetted	Avoid Gazetted forests	Contractor

No.	County	Land types/ Sensitive Ecosystems	Potential Risks	Likelihood of project falling in sensitive ecosystem	Mitigation Measures	Responsibility
				area not settled)		
		Vuria	Highest point in Taita Hills and an important water catchment area. Rugged landscape and soggy grounds	Low (Sparse settlements around the area)	Promote use of Concrete poles on soggy grounds. Avoid siting poles on unstable grounds.	Contractor

c) Generic Environmental, Social, Health and Safety Management Plan (ESHS-MP)

The purpose of the Generic Environmental, Social, Health and Safety Management Plan (ESHSMP) is to provide guidance during the implementation of the Proposed KPLC Projects, guide the Contractor during preparation of site specific ESHSMPs and ensure compliance to relevant Legal and Statutory requirements applicable to the Last Mile Connectivity Project. Towards this end, the ESMP will:

- Ensure that proper appraisals on the effects of projects takes place and that proper measures are put in place to mitigate the effects;
- Set out the basis for compliance and enforcement of terms and conditions for approval;
- Design compliance strategies; and
- Monitor compliance and managing of the environment.

Table 7: GENERIC ESMP AND MITIGATION PROGRAM

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	Responsibility	Activity	Responsibility		
1	Electric shocks and electrocution of people.	Proper public education to the people on safe use of electricity	KPLC	Inspection	KPLC	No of Public safety awareness sessions held • No of accidents recorded • No of deaths	Pre-construction, construction and Post Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	**Responsibility**	**Activity**	**Responsibility**		
						• Medical Records.	
		Proper wiring in the customers' premises by qualified technicians	Contractor	Inspection and issuance of Wiring Certificates	Contractor	Availability of wiring certificate	construction
		Installation of danger /*hatari* signs on the MV poles	Contractor	Inspection	Consultant	Presence of Danger or Hatari signs on all MV poles	construction
2	Avifauna collisions and fatalities	Ensure that the new MV lines run along road reserves and be short(not more than 1 kilometer) extensions of existing line where birds are used of the obstacle to prevent any accidental collisions and electrocutions	Contractor	Inspection	Consultant	• No. of avifauna killed • Insulated cables used	Pre-construction, Construction
		Maping of bird areas and detail mitigation measures to be taken, e.g use of insulated conductors, delta formation of	Contractor	Inspections	Consultant	No. of avifauna killed	Pre-construction and construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	**Responsibility**	**Activity**	**Responsibility**		
		the lines (Refer to technical drawings)					
3	Impacts on air quality from vehicle exhaust emissions	Ensure that Drivers do not leave vehicles idling so that exhaust emissions are lowered.	Contractor	Inspections	Consultant	No. of vehicles and frequency of idling onsite	Construction
		Maintain all machinery and equipment in good working order to ensure minimum emissions are produced during construction.	Contractor	Inspections	Consultant	Maintenance Records	Construction
4	Solid waste (Little if any solid waste will be generated which includes conductor and tree cuttings)	Ensure that: • All left over conductor cuttings are disposed appropriately or returned to the store for proper disposal • Proper budgeting of materials to reduce wastage.	Contractor	Inspection	Consultants	• No waste on site • Records of material return to store or disposed	Pre-construction and Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	**Responsibility**	**Activity**	**Responsibility**		
		• practice 3 Rs of waste management: reduce, reuse, recycle of materials					
5	Management of Scrap poles. (Risk of hazardous chemicals used in pole treatment, danger of injury to public)	Recover all Scrap poles and take them to the nearest KPLC stores for appropriate disposal.	Contractor	inspection	Consultant	Delivery forms	Construction
6	Negative cultural exchange and social ills	Ensure tolerance and respect of varying cultures	Contractor	inspection	Consultant	Number of complaints from workers and Community	Construction
7	Occupational safety and health hazards such as risk of falling from heights, Cuts, Exposure to welding fumes/lig	Ensure: • Safe work procedures are adhered to. • Safety awareness creation to the workers • Use of personal protective equipment like	Contractor	Inspection	consultant	• Workers in PPE • Records of safety awareness sessions held with workers • Fully stocked First Aid Kit • Competency records	Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	**Responsibility**	**Activity**	**Responsibility**		
	ht, Exposure to paints, falling into dug holes etc.	gloves, helmet, climbing shoes, harnesses etc. • Staff Training and regular equipment service and testing • Only trained & certified workers to install electrical equipment ; • Use of signs, barriers and education/ public outreach to prevent public contact with potentially dangerous equipment ; • Maintain a fully stocked and accessible first aid kit and				• Tool box talk records	

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	**Responsibility**	**Activity**	**Responsibility**		
		trained first aiders • Observe OSHA 2007 regulations					
8	Vandalism of Transformers	Community policing to be encouraged to reduce vandalism of transformers	KPLC	Public awareness and Sensitization forums	KPLC	No. of vandalism cases reported	Pre-Construction, Construction and Post construction
		Welding of installed new transformers	Contractor	Inspection	Consultant	No of welded transformers	construction
9	Loss of physical cultural resources	Report all chance finds to National Museums of Kenya (NMK)	Contractor	Inspection	Consultant	Records of any chance finding reports to NMK	Pre-construction and Construction
10	Oil Leaks	Ensure that all oil leaks that may result from the transportation, storage and installation of transformers and other associated equipment are segregated and disposed properly by a reputable/registered waste handler in accordance with the waste disposal plan.	Contractor	Inspection	Consultant	Records of oil leaks	Preconstruction, Construction and Post-Construction
11	Public health	• Public awareness	Contractor	Inspection	Consultant	• HIV/AIDS	Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	**Responsibility**	**Activity**	**Responsibility**		
	risk/ HIV/AIDs	on HIV/AIDs • ensure Provision of condoms • distribution of HIV & AIDS awareness materials in collaboration NACC				Awareness materials disbursed to the public • Availability of Condoms • No of public health awareness sessions with workers	
12	Impact on Natural Vegetation (The project will involve power lines mainly along the road reserves)	• Limit way leave areas where line traverses private land and ensure that it runs along the road reserve and the existing wayleave as much as possible. • Ensure Proper demarcation and only clear vegetation (upon approval by KPLC) in	Contractor	Inspection	Consultant	• No of trees cut • Vegetation clearance Approval records	Pre-Construction and Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	**Responsibility**	**Activity**	**Responsibility**		
		necessary areas • Use PVC covered conductors for LV phase conductors					
	Damage to Privately owned trees and crops	In the unlikely event the line is routed through private land and trees/crops are affected, KPLC will compensate.	KPLC	Inspection	KPLC	• No. of trees/ crops compensated • Compensation record	Preconstruction
13	Construction material sourcing-wooden poles. (Majority of these distribution lines are constructed using wooden poles)	Proper bill of quantities to be adhered to ensure no over-procurement of wooden poles (Refer to prices schedule No. 1 and 2 of the bidding document)	Contractor	Inspection of Designs	Consultant	• No. of wooden poles used vis-à-vis purchased	Preconstruction and Construction period
		Ensure Proper storage of poles to minimize loss	Contractor	Inspection	Consultant	No of spoilt poles	Pre-Construction and Construction
		Source poles from NEMA (or equivalent)	Contractor	Inspection	Consultant	Certifications and licensing of the suppliers	Pre-Construction and Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	**Responsibility**	**Activity**	**Responsibility**		
		approved suppliers					
		Ensure Use of recyclable poles where possible	Contractor	Inspection	Consultant	No. of recycled poles	Construction
14	Noise	Ensure: • Proper servicing of vehicles • minimal noise generation during construction and Maintain all work equipment at optimal operating condition • Monitor noise levels at sensitive receptors (residential areas, schools, hospitals) • Work through community liaison officers to agree on working hours and respond promptly to complaint	Contractor	Inspection	Consultant	• Inspection reports • Number of complaints	Construction

No	Potential negative impacts	Mitigation measures		Monitoring activities and surveillance		Performance Indicator	Timing
		Measure	**Responsibility**	**Activity**	**Responsibility**		
		s.					
15	Risk of open Fires during construction	Ensure: • No burning of vegetation along the distribution lines rights-of-way • Avoid careless handling of open fires	Contractor	Surveillance	Consultant	Number of fire incidences	Construction

7 CHAPTER SEVEN: GRIEVANCE REDRESS MECHANISM

Grievance Redress Mechanisms provide a formal avenue for affected groups or stakeholders to engage with the project implementers or owners on issues of concern or unaddressed impacts. Grievances are any complaints or suggestions about the way a project is being implemented. They may take the form of specific complaints for damages/injury, concerns about routine project activities, or perceived incidents or impacts. Identifying and responding to grievances supports the development of positive relationships between projects and affected groups/communities and other stakeholders.

Best Practice outlines requirements for Grievance Redress Mechanisms for some projects. Grievance Redress Mechanisms should receive and facilitate resolution of the affected institutional or communities' concerns and grievances. Best Practice requires the concerns to be addressed promptly using an understandable and transparent process that is culturally appropriate and readily acceptable to all segments of affected communities, at no cost to the affected parties and without retribution. Mechanisms should be appropriate to the scale of impacts and risks presented by a project. Grievances can be an indication of growing stakeholder concerns (real and perceived) and can escalate if not identified and resolved. The management of grievances is therefore a vital component of stakeholder management and an important aspect of risk management for a project. Projects may have a range of potential adverse impacts to people and the environment in general. Identifying grievances and ensuring timely resolution is therefore very necessary for the implementation of the project.

Grievances can be grouped into three categories (A, B or C) as outlined below.
Category A: action – these are issues requiring action which is not of urgent nature and are typically procedural or dispute type issues.

Category B: Urgent action-these are issues which cause a nuisance or a long-term safety to the community members, employees and the environment.

Category C: Immediate action-these issues require immediate actions and are typically issues which threaten the short-term safety of the community member's e.g. chemical spills or accidents near community water supply or sensitive environments.

Grievances can further be assigned a level of significance as follows:
Significance criteria:

Level 1 –one-off event;
Level 2 – complaint is widespread or repeated;
Level 3- any complaint (one-off or repeated) that indicates breach of law or policy or this ESMF provisions

To address such arising issues, the Project Proponent shall form a Project Resettlement Committee (PRC) on a need basis during the life cycle of the project.

The committee shall comprise of;

- The local community representatives/PAPs representatives

- Local Administration Officers (Chiefs and/Village Elders)
- The proponent's representatives (P.I.U)
- A Representative of the Contractor
- The Consultant
- Any other relevant stakeholders

A simple description of grievance redress is as outlined in the following table:

STEP	RESPONSIBILITY	ACTION
1.	Complainant	Aggrieved Project Affected Person (PAP) raises complaint to the KPLC or the Contractor or the Consultant.
2.	Village elders	• Resolve culturally related issues, boundary disputes especially where there is no adjudication • Deal with payment related complains among family members Redirect Unresolved complains to the Chief.
3.	Chief	The Chief is the Chair of the PRC, uses his office to resolve the grievance, and those that can not be resolved at this stage are escalated to the Contractor, Copy to the PRC
4.	Contractor	The Contractor receives issues from complainant(s), report to the consultant for recording and resolves issues under his control. Any un-resolved issues are escalated to the Consultant for redress.
5.	Consultant	The consultant, who is the Secretary of the PRC, keeps a record of all grievances, regularly updates it and Arbitrates grievances between the Contractor and the PAPs. For grievances that are not resolved, the Consultant escalates to KPLC PIU. The consultant monitors the overall process of GRM.
6.	KPLC P.I.U	The P.I.U reviews cases and solves those within their mandate.
7.	Project Resettlement Committee	Receives Complaint, documents and assigns it its respective category (A, B or C) and Significance Level (Level 1, 2 or 3). The PRC invokes settlement mechanisms for the dispute starting with the local community dispute resolution procedures. If it is not resolved immediately it is assigned to the responsible person/Institution. Pending issues are escalated to the MoE.
8.	Ministry of Energy	Arbitrate grievances between KPLC and aggrieved parties
9.	Alternative dispute Resolution Mechanism	Any disputes not resolved, or the PAPs feel dissatisfied with the resolutions passed, the PAP will be at liberty to seek redress through the Courts.
10.	Land and Environment Court	Grievances concerning Land and Environmental not addressed through the laid down GRM, the aggrieved persons are at liberty to seek redress from Kenyan Environmental and Land Courts of Law.

STEP	RESPONSIBILITY	ACTION
		The land and Environment court is mandated to solve disputes relating to environmental planning and protection, climate issues, land use planning, title, tenure, boundaries e.t.c.

The following process shall serve as a guide in Grievance Redress during the AFD/EU/EIB LMCP Project implementation.

Process	Description	Responsibility	Time Frame	Other Information
Grievance raised by Project Affected Person(PAP)	Face to face; phone; letter, e-mail; recorded during public/community interaction; others	Complainant	-	Email address; hotline number
Grievance assessed, given categorization and logged	Significance assessed, and grievance recorded or logged (i.e. in a log book)	Consultant	1-6 Days	Significance criteria: Level 1 –one off event; Level 2 – complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or policy or this ESMF provisions
Grievance is acknowledged	Acknowledgement of grievance through appropriate medium	Consultant	1-3 Days	
Development of response	Grievance assigned to appropriate party for resolution Response development with input from PIU/ relevant stakeholders/PRC	Consultant	4-7 Days	
Response signed off	Redress action approved as appropriate	Consultant	8-15 Days	
Implementation of Response	Redress action implemented	Contractor	15-30 Days	
Communication of implementation of response	Update of progress on resolution communicated to complainant	Consultant	3-5 days	

Process	Description	Responsibility	Time Frame	Other Information
Follow up	Seek confirmation from complainant	Consultant	7 Days	This can be verified through site visit, telephone call, email or letter (depending on how the complainant conveyed his/her grievance to KPLC)
Closure	Closure and communication to the PIU	Consultant	7 Days	The complain needs to be closed and communicated to the PIU

KPLC as a proactive organization has developed a Grievance Redress Mechanism procedure to use in case of any incidence or complaint from the public or affected persons. **See Annex 6.**

8 CHAPTER EIGHT: RESPONSIBILITIES FOR ENVIRONMENTAL AND SOCIAL MONITORING

Environmental and Social Monitoring will be carried out by the KPLC PIU in conjunction with the relevant Government Departments that have been given that responsibility by the Kenyan laws. Monitoring of Environmental and Social standards need to be carried out during the construction of the new distribution power lines, associated transformers and LV power lines.

The Consultant will enforce implementation of the ESMF and report any non-compliance to KPLC.

The Contractor will ensure compliance, keep records of all incidences and report to KPLC and the Consultant. Any serious or fatal accidents will be reported by the contractor to DOSHS.

The table below provides some of the key Environmental and Social Monitoring indicators, to be adapted to the projects as necessary.

Table 8: Key Environmental and Social Monitoring indicators

ISSUE	REMARKS
Reduction in soil erosion	
Increase in re-afforestation	
Drainages around infrastructures	
Wayleave acquisition	
Hectares of land acquired	
Number of people affected	
Type and amount of assets to be affected for the community members and government by the project	
Number of persons expressing willingness to relocate	
Number of persons expressing unwillingness to relocate	
Livelihood status prior to project	
Livelihood status after project	
Has standard of living increased, decreased, or remained the same	
Number of women employed by civil works	
Number of employees receiving HIV/AIDS awareness training at work site	
Number of community members receiving HIV/AIDS awareness training during project implementation	
Number of people employed from project surrounding areas	
Construction Works of the proposed projects	

ISSUE	REMARKS
Hectares of land cleared	
Project areas where infrastructure will be constructed	
Number of pit latrines for workers at camp site	
Number of water points for workers at camp site	
Number of environmental mitigation measures implemented and financed by projects	
Implementation status of safe disposal of creosote-treated poles	
Implementation status of the Environmental Guidelines for Contractors	
Number of staff and other personnel having completed environmental training	
Implementation status of safe disposal of PCB	
Number of complaints on inconveniences caused by the construction works (complaints against dust)	
Number of Accidents	
Number of cases contravening health and safety procedures	
Number of disposal sites for wastes from the construction sites and camp sites	
Number of Disposal sites that will be restored to original or better state in terms of environmental degradation.	

The SHE department ensures compliance with National and International Environmental Regulations and with the European Investment Bank and World Bank Environmental and Social Standards.

9 CHAPTER NINE: CONCLUSION AND RECOMMENDATIONS

This Environmental and Social Management Framework (ESMF) has been prepared to establish the mechanism to determine and assess future potential adverse Environmental and Social impacts of sub-projects that are to be identified and cleared under AFD/EU/EIB LMCP.

This ESMF is meant to ensure that the implementation of the AFD/EU/EIB LMCP, of which the specific sub-project sites are unknown at this stage, will be carried out in an environmentally and socially sustainable manner. The ESMF provides the project implementers with an Environmental and Social Screening Process that will enable them to identify, assess and mitigate potential Environmental and Social impacts of sub-project activities, including the preparation of site-specific Environmental Social Impact Assessments (ESIA) where applicable, in accordance with the EMCA, 1999.

Consequently, specific information on the number of sub-projects, site location of subprojects, land requirements, geo-physical land features, nature, type and use of equipment, etc. are not available at this stage. Therefore, exact details and the intensity of Environmental and Social impacts and their effective mitigation cannot be determined.

The framework delineates the European Investment Bank Environmental and Social Standards that are likely to be triggered by the proposed Last Mile power connectivity project, identifies potential environmental concerns/impacts, Environmental and Social Management Plan, institutional responsibilities, and technical assistance required.

In view of all these the ESMF therefore recommends the following;

- The implementation of AFD/EU/EIB LMCP sub-projects (**lots**) should strongly integrate Environmental and Social issues as outlined in this ESMF. Furthermore, the implementation of the AFD/EU/EIB LMCP as well as its subprojects must comply with the Kenyan Policies and Laws as well as European Investment Bank Polices and World Bank safeguard policies as defined in Chapter 4
- The proposed project selection, design, contracting, mitigation, monitoring and evaluation will be consistent with agreed process outlined in the ESMF and lot specific ESMPs will be fully integrated into the Project Implementation Plan/ Operations Manual.
- Adherence to ESMF requirement - the ESMF requires this project to ensure that procedures are followed in relation to Environmental and Social Screening, review and approval prior to implementation of sub-projects to be financed under the AFD/EU/EIB LMCP. Furthermore, appropriate roles and responsibilities, for managing and monitoring environmental and social concerns related to sub-projects shall also be followed.

REFERENCE

- Building Code 1968
- County Government Acts, 2012
- Energy Act of 2006
- Environmental Management and Coordination (Fossil Fuel Emission Control) Regulations 2006
- Environmental Management and Coordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006
- Environmental Management and Coordination (Noise and Excessive Vibration pollution) (Control) Regulations, 2009: Legal Notice 61
- Government of Kenya Wayleave Act
- Government of Kenya Roads Board Act
- Government of Kenya State of Environment 2010
- Government of Kenya Public Procurement and Disposal Act
- Government of Kenya Roads Act
- Government of Kenya Fiscal Management Act (CAP 5) of 2009
- Government of Kenya Antiquities and Monuments Act, Cap 215 of 1983
- Government of Kenya Employment Act, 2007
- Government of Kenya Maritime Authority Act 2006
- Kenya Vision 2030: A Globally competitive and prosperous Kenya 2007
- Land Act, 2012
- Occupational Safety and Health Act, 2007
- Penal Code Act (Cap.63)
- Physical Planning Act, 1996
- Public Health Act (Cap. 242)
- The Civil Aviation Act No. 21 of 2013
- The Constitution of Kenya, 2010: Constitutional provisions
- The Environment Management and Co-ordination Act, 1999
- The Environmental Management Coordination (Water Quality) Regulations): Legal Notice 120
- The Environmental Management Coordination (Waste Management) Regulations): Legal Notice 121
- The Environmental (Impact Assessment and Audit) Regulations, 2003
- The Forestry Services Act, 2005
- The Land and Environment Court Act 2011
- The Traffic Act Cap 403 0f 2009
- Wildlife Conservation and Management Act, 2013
- Urban Areas and Cities Act No. 13 of 2011
- Water Act, 2002
- Work Injury and Benefits Act, (WIBA) 2007
- Kenya power Safety Rules Handbook 2014
- Project documentation for AFD/EU/EIB LMCP
- European Investment Bank Environmental and Social Standards

ANNEXES

1.Annex 1: Sample Environmental and Social Screening Form

ENVIRONMENTAL AND SOCAL SCREENING FORM

Introduction

This form is a tool to standardize the environmental and social screening process of AFD/EU/EIB LMCP sub-projects

The main objective of the screening process is to identify and highlight environmental and social issues that need to be taken into account in further decisions, planning, and design of a project. The aim is to support the sustainable implementation of the planned investments under the above project.

The screening must be carried out at an early stage of the sub-project (i.e., prefeasibility), in accordance with the requirement for donor financed projects. The proponent must complete each section of this form, as outlined below.

GENERAL PROJECT DESCRIPTION AND SETTING		
	General Aspects/Questions	**Provision of answers to project aspects**
1.	Name and/or Title	
2.	Project Type	
3.	Expected start and end date (month/year) & project duration (in months) of the construction phase:	
4.	List the technology and machinery to be used in the construction and operation phases	
5.	List the materials to be used during the construction and operation phases (e.g., infrastructure, creosote treated poles, fuels and oils):	
6.	Expected number of workers during construction& operation:	
7.	Provide a map with the geographical location of the project;	
8.	Provide an appropriately-scaled map clearly showing: The project area with existing buildings, infrastructure, vegetation, and land use if Possible; The project area with any planned construction, plants, lines, or access roads if Possible	
9.	Is the project area or its immediate surroundings subject to pollution or environmental damage caused by other (existing) activities?	
10.	Is there any other infrastructure in or close to the project area?	

THE SOCIAL ASPECTS		
	Social issues around the project area	**Describe the potential issues/impacts**
11.	Existing land uses on and around the (existing transformer)/project area	
12.	Land uses on or near the project area which will be negatively affected by project implementation?	
13.	Presence of residential/sensitive areas e.g. community facilities	
14.	Present owner(s)/users of the project area	
15.	Population density	
16.	Job opportunities (for the local people)	
17.	Effects of project on people's access to land or natural resources	
	Compensation to property damage	
18.	Effects of project on incomes, value of land and other economic activities?	
19.	Construction workers (number and how long they will spend in project area)	
20.	Exposure of community/public to diseases	
21.	Safety of workers (e.g. occupational health and safety issues)?	
22.	Public engagement (role of the project beneficiaries across all phases of the project)	
23.	Public risk to shocks and electrocution	
24.	Public awareness on use of the service (electricity)	
25.	Population density	
26.	Presence of Indigenous Peoples in the project area	
Conclusion from the screening process		
Physical Features		
27.	Topography/terrain	
28.	Soil (type & quality)	
29.	Surface water (presence & quality)	
30.	Sediments/substance (Type and quality)	
31.	Ground water (local use & quality)	
32.	Air quality (any pollution issues)	

Biological features		
33.	Vegetation (trees, ground cover, aquatic vegetation)	
34.	Wetlands (e.g. bogs, fens and marshes)	
35.	Fish and fish habitant	
36.	Birds (water fowl, migratory birds and others)	
37.	Mammals	
38.	Special habitat areas (special designations or identifies sensitive zones)	
39.	Archaeological resources (recorded or potential for them to exist)	
40.	Special designations (parks, protected areas)	
41.	Traditional economic/cultural activities (trapping, fishing, collection of medicinal plants)	
Conclusion from the screening process		

Screening Form was completed by:

Name_____
____

Position_____
____

Signature_____

Date_____
____

Screening Results were reviewed and approved by:

Name_____
___

Position_____
____

Signature_____
____

Date_____
____

1. Annex 2: Sample Environmental and Social Checklist Form

Please note that this checklist does not concern itself with screening which was done through annex 1

Potential Environmental & Social Impacts of Distribution component	**Proposed Mitigation Measures**
Creation of social conflict or inequity	Community participation & buy-in
Erosion of economic land value	Plan land use change Compensation, relocation
Damage to historical/cultural monuments or artefacts	Relocation of project affected people
Increased Deforestation	Afforestation
Nuisance – dust, smell or noise	Planning and sitting
Water and soil pollution	Control of water and soil pollution
Soil Erosion	Provide and use approved storm water drainage
Health hazards to workers and communities	Sensitize workers and community on safety and health measures
Increasing incidence of communicable diseases	Communication and awareness
Impacts of creosote-treated poles	Proper disposal of waste creosote treated poles
Impacts of PCB at sub-stations	Contractor, workers and community awareness
Impacts on aquatic flora and fauna	Minimize clearing of the natural habitat
Strain on vegetation cover	Minimize clearing of the natural habitat
Changes in migration patterns of humans and animals	Integrate with rural planning
Inundation of cultural or archaeological resources or artefacts	Consider alternative siting Remove resources;
Water logging of soil	Micro-engineering solutions
Loss of scenic value	Re-vegetate
Disruption of land tenure, ownership rights	Community participation & buy-in;
Population migration to the area	Integrate with rural planning
Relocation of people	Community participation & buy-in(*Relocation of people will not be applicable to the LMCP Project)*;
Indigenous Peoples	To be involved
Community participation & support, implementation of VMGF	Cooperation among all stakeholders
sub-project specific recommendations	
Sub-project	**Recommendations**
Substations (Transformers)	
Power Lines (distribution and transmission, medium voltage, low voltage, high voltage	
Wayleaves/Access roads	

2. Annex 3: Sample ESHS Report Format

Contract: **Period of reporting:**

ESHS management actions/measures:

Summarize ESHS management actions/measures taken during period of reporting, including planning and management activities (e.g. risk and impact assessments), ESHS training, specific design and work measures taken, etc.

ESHS incidents:

Report on any problems encountered in relation to ESHS aspects, including its consequences (delays, costs) and corrective measures taken. Include relevant incident reports.

ESHS compliance:

Report on compliance with Contract ESHS conditions, including any cases of non-compliance.

Changes:

Report on any changes of assumptions, conditions, measures, designs and actual works in relation to ESHS aspects.

Concerns and observations:

Report on any observations, concerns raised and/or decisions taken with regard to ESHS management during site meetings and visits.

Signature (Name, Title Date):
Contractor Representative

3. Annex 4: Example Format: ESHS Incident Notification

Provide within 24 hours to the Supervising Engineer

Originators Reference No: **Date of Incident:** **Time:**
Location of incident:
Name of Person(s) involved:
Employing Company:
Type of Incident:
Description of Incident:
Where, when, what, how, who, operation in progress at the time (only factual)

Immediate Action:

Immediate remedial action and actions taken to prevent reoccurrence or escalation
Signature (Name, Title, Date):

Contractor Representative
Example Format: Detailed ESHS Incident Report

The Incident Notification should be follow-up by a Detailed ESHS Incident Report
Containing the following information where applicable

1. Incident Summary
2. Specific Details
Date
Time
Place
Weather/Visibility
Road conditions
3. Persons Involved
Name/s
Age/s
Experience
Date joined Company
Last Medical Check
Current Medical Treatment
Evidence of Drugs/Alcohol
Last Safety Meeting attended
Infringements/Incidents record
4. Equipment Involved
5. Description of Incident
6. Findings of Investigation Team Interim/Final
Investigation Team Members

Persons Interviewed
Recommendations & Remedial Actions
Investigation Methodology
7. Signature (Name, Title, Date):
8. Attachments
Photographs
Witness Statements and Incident Notification Report

4. Annex 5: Guidelines for the preparation of Lot specific ESMP

The preparation of an ESMP should include the following key sections:

1. **Summary of Impacts:** Anticipated adverse environmental impacts should be identified and summarized as well as their relationship to social impacts and the appropriate mitigation measures.

2. **Description of Mitigation measures:** The mitigation measures proposed for the various impacts should be described in relation to the corresponding impacts while stating the conditions under which they are required. Adequate description of the consultations should be done and justified.

3. **Description of monitoring program:** A detailed monitoring program should be described in the ESMP, listing environmental performance indicators and their link with impacts and mitigation measures. The ESMP should also describe the parameters to be measured, methods to be used, sampling location and frequency of measurements, detection limits and a clear definition of thresholds that indicate the need for corrective measures. Monitoring and supervision schedules should be clearly stated and agreed with KPLC to ensure timely detection of needs for remedial action and also provide information on the level of compliance with ESMF . These arrangements must be clearly stated in the project implementation/operations manual to reinforce project supervision.

4. **Institutional arrangements:** The ESMP should clearly state who is responsible for monitoring, execution of remedial action and the reporting order and format to allow for a defined channel of information flow. It should also recommend institutional strengthening for relevant agencies and the funding authorities for the various activities.

5. **Capacity Development and Training:** To support timely and effective implementation of environmental project components and mitigation measures, the ESMP draws on the assessment of the existence, role and capability of environmental units on site at the contractor's disposal. If necessary, the ESMP recommends the establishment or expansion of such units, and the training of staff, to allow implementation of ESMP recommendations. Specifically, the ESMP provides a specific description of institutional arrangements i.e. who is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). To strengthen environmental management capability in the agencies responsible for implementation, most ESMPs cover one or more of the following additional topics: (a) technical assistance programs, (b) procurement of equipment and supplies, and (c) organizational changes.

6. **Implementation Schedule:** The frequency, timing and duration of mitigation measures and monitoring should be stated in the implementation schedule. Links between mitigation measures and development of relevant institutions and legal requirements of the project should be stated.

7. **Reporting:** The order of information flow as it concerns monitoring reports should be clearly defined. The relevant officers to receive these reports should be those who have authorities to facilitate implementation of the results of the monitoring. These reports should also be communicated to the Consultant and KPLC via media to be agreed and specified in the ESMP. Adequate arrangements should be made by the Consultant to facilitate the circulation of the ESMP through the selected means.

8. **Cost estimate:** The cost of carrying out monitoring and implementation of the mitigation measures at the various stages of the project should be integrated into the total cost of the project and factored into financial negotiations. These costs should include administrative, design and consultancy, operational and maintenance costs – resulting with meeting required standards and project design.

Sample ESMP Table (Note: The contents of this table are only indicative)

Project Activities	**Potential Environmental & Social Impacts**	**Proposed Mitigation Measures**	**Responsibility for implementing mitigation measures**	**Responsibility for Monitoring implementation of mitigation measures**	**Time Horizon**	**Cost Estimates (US$)**
Construction of new substations; Construction of new access roads; Use of quarries and borrow pits Establishment of camp sites	Loss of vegetation, noise, dust, soil erosion, Construction waste, Generation of wastewater, Increase of water use; Loss of livelihoods; Spoil materials due to construction material excavation	Apply Environmental Guidelines for Contractors Compensate for cut trees Implement EA and/or screening recommendations through contract requirements	Contractor KPLC-PIU	KPLC-PIU and Environment unit and Regional staff	Throughout construction period Prior to civil works	Incl. in Contract

Project Activities	Potential Environmental & Social Impacts	Proposed Mitigation Measures	Responsibility for implementing mitigation measures	Responsibility for Monitoring implementation of mitigation measures	Time Horizon	Cost Estimates (US$)
		Use of separators Contractors.				
Rehabilitation of existing substations (Transformers) and Lines	Interruption of services	Inform public of planned works and their potential environmental and social impacts	KPLC – PIU.	KPLC-PIU and Environment unit and Regional staff	Throughout construction period	None
	Increase of noise, dust, soil erosion, Construction waste, Generation of wastewater, Increase of water use Soil and water pollution due to PCB	Apply Environmental Guidelines for Contractors; Implement EA and/or screening recommendations through contract requirements Contamination sites should be covered with a barrier or coating to avoid contacts. Laboratory screening tests PCB waste management	Contractor KPLC-PIU Contractor and KPLC-PIU	KPLC-PIU and Environment unit and Regional staff	Throughout construction period	Incl. in Contract
Construction of new power lines	Loss of vegetation, noise, dust, soil erosion,	Apply Environmental Guidelines for Contractors	KPLC-PIU	KPLC-PIU and Environment unit and Regional staff	Throughout construction period	Incl. in Contract

Project Activities	Potential Environmental & Social Impacts	Proposed Mitigation Measures	Responsibility for implementing mitigation measures	Responsibility for Monitoring implementation of mitigation measures	Time Horizon	Cost Estimates (US$)
	Construction waste Use and disposal of Creosote treated poles Loss of livelihoods					
Rehabilitation of existing power lines	Interruption of services	Inform public of planned works	KPLC-PIU	KPLC-PIU and Environment unit and Regional staff	Throughout Rehabilitation period	None
	Use and disposal of creosote treated poles	Burning of this woods in high temperature incinerators Recycle and use of the poles Waste poles to be disposed in landfills	Contractor	KPLC-PIU and Environment unit and Regional staff	Before construction works	To be calculated when affected sites will be identified

5. Annex 6: Sample of Kenya Power's Grievance Redress Mechanism

1. Introduction

In the process of AFD/EU/EIB Last Mile Project implementation complains and issues may arise which needs to be resolved for successful implementation of the project. Therefore, the Grievance Redress Mechanism addresses the process and procedure to be followed in addressing such complaints.

To address such arising issues the proponent shall form a Grievance Redress Committee.

2. The constitution of the grievance redress committee

The basic idea in the formation of the committee is to have all the stakeholders represented. Therefore, the proponent, the government and the affected community shall have representatives in the committee.

The committee therefore shall comprise of;

- The proponent's representatives (Valuer, Socio-Economist, Surveyor, Environmentalist and Wayleave Officer)
- The local community representatives/PAPs representatives
- Local Administration Officers
- Any other relevant stakeholders

The roles of the committee include;

- Resettlements and compensations of on the ground,
- Ensuring that grievances are promptly addressed
- Linking PAPs to the other stakeholders

3. The grievance redress process

- **Publicizing the grievance management procedures**

The grievance mechanism will be introduced to the project stakeholders as a part of the project stakeholder engagement program stating the purpose of the projects grievance mechanism and the type of responses complainants can expect from the GRC. The uptake channels should be publicized and advertised via local media, the implementing agency and—where relevant—contractors.

- **Receiving and registering the grievance**

Any member of the grievance redress committee can receive the complaints from the public either through direct face-face meetings or in writing.
The members who receive complaints verbally should put them in writing for them to be considered. Recognizing that many complaints may be resolved 'on the spot' and informally by committee, there are opportunities to encourage these informal resolutions to be registered to (i) Encourage responsiveness; and
(ii) Ensure that repeated or low-level grievances are being noted in the system. The GRM should have the ability to handle anonymous complaints

- **Documenting the grievance**

All grievances received will be documented and records kept. The records should indicate the grievances received, grievances resolved and grievances not resolved. Complainants should be handed a receipt and a flyer that describes the GRM procedures and timeline (staff should be trained to read this orally for illiterate complainants). Where possible, the grievance log should capture complaints being made via informal or traditional systems, such as village councils or elders.

- **Reviewing and investigating grievances**

The grievances shall be screened to determine whether they are eligible for the grievance mechanism. Ineligible complaints include those that are not project related or those that the community procedures are more appropriate to address. Eligibility should be a procedural step to ensure that the issue being raised is relevant to the project. It is often better to ensure a relatively low barrier to entry with quick turnaround rather than to prevent users having their issues considered. Complaints that cannot be resolved on the spot should be directed to the grievance focal point who will have a set number of days to assess the issue and provide a written response to the complainant, acknowledging receipt and detailing the next steps it will take (one week or less is recommended).
The grievances are categorized in three categories (A, B or C)

Category A: Immediate action-these issues require immediate actions are typically issues which threaten the short-term safety or the community member's e.g. chemical spills or accidents near community water supply or sensitive environments.

Category B: Urgent action-these are issues which cause a nuisance or a long-term safety to the community members, employees and the environment. They should be communicated to the M (SHE) within 12 hours after receiving and be responded to within 72 hours.

Category C: action – these are issues requiring action which is not of urgent nature are typically procedural or dispute type issues.

- **Action and Feedback**

This is the development of resolution options taking into consideration the community preferences, project policy, past experience, current issues and potential outcomes

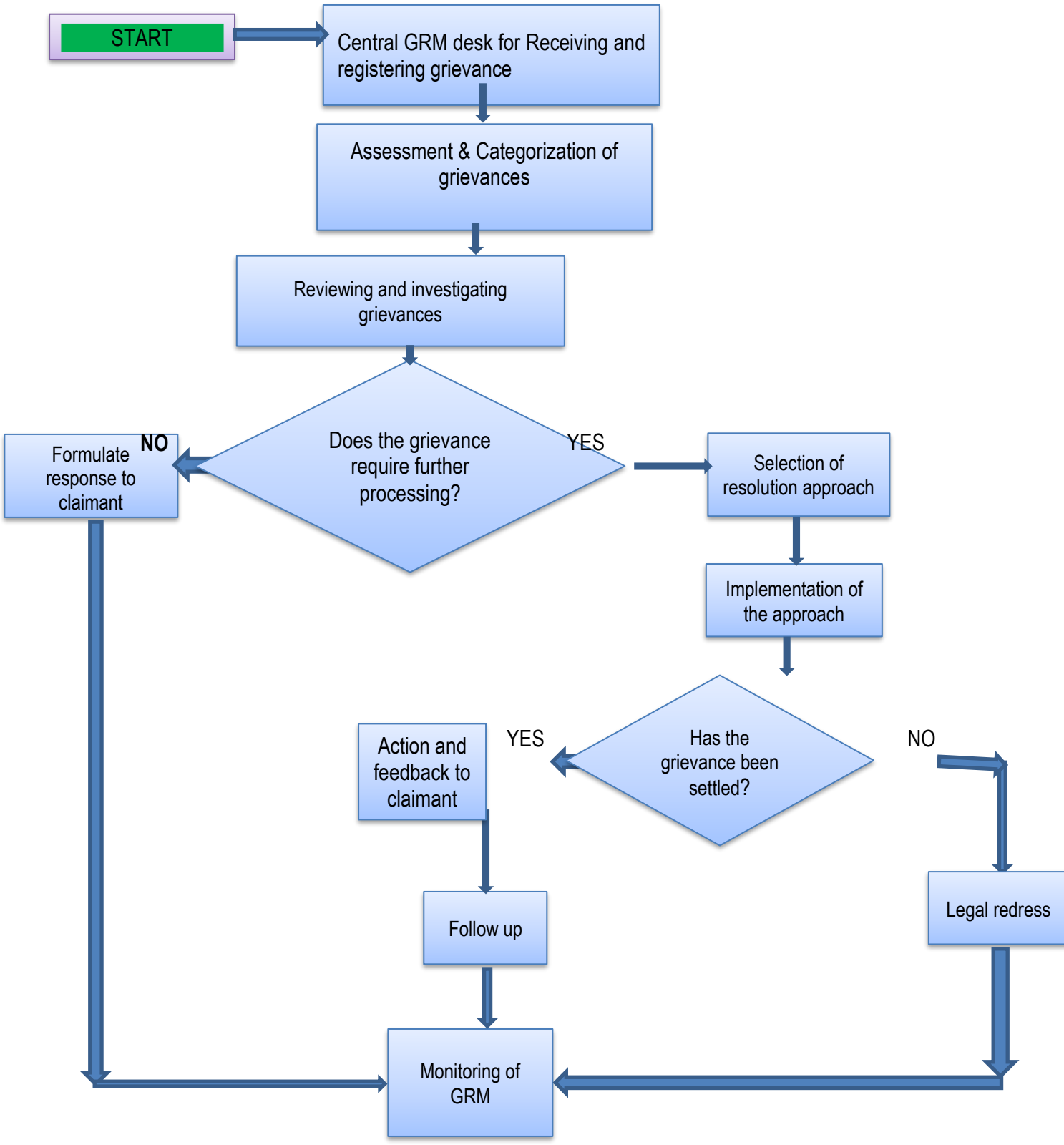
- **Closure**

All grievance records and supporting documents will be filled and recorded in the database. Upon completion of the agreed upon corrective actions, collect proof that these actions have taken place this includes photos, documentary evidence record of resolution which is signed and dated by the responsible staff member and if the resolution have been to the satisfaction of the complainant confirmation of this for the record. These are all included and recorded in the case documentation. If complainants remain unsatisfied with the grievance process, they have the right of recourse to the courts.]

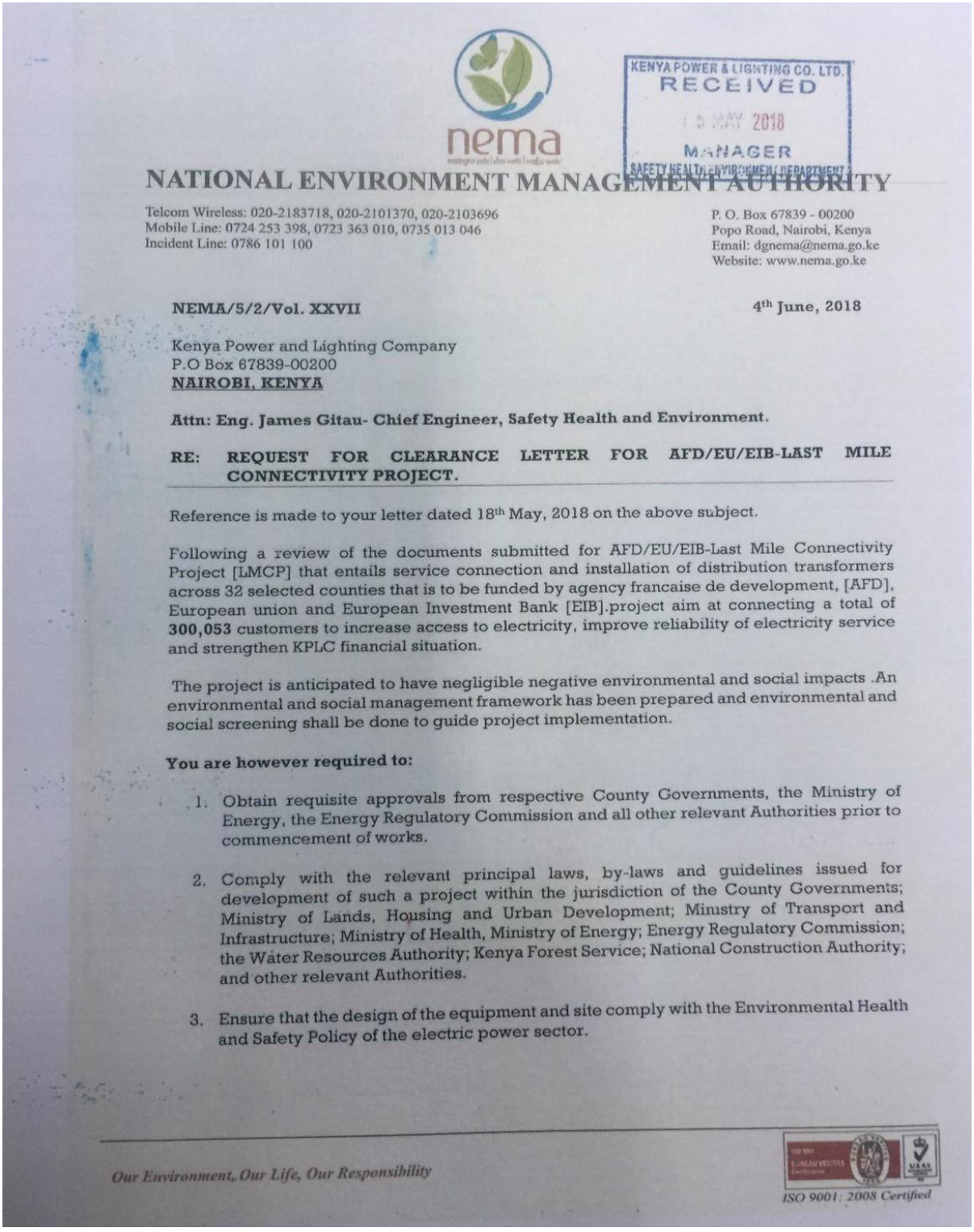
- **Monitoring, Reporting and Evaluation**

Monitoring and reporting are the tools for measuring the effectiveness of the grievance mechanism, efficient use of project resources and for determining trends and recurring problems to facilitate proactive resolution.

THE GRIEVANCE REDRESS MECHANISM PROCESS



6. Annex 7: NEMA AFD/EU/EIB LMCP CLEARANCE LETTER



KENYA POWER & LIGHTING CO. LTD.
RECEIVED
15 MAY 2018
MANAGER
SAFETY HEALTH & ENVIRONMENT DEPARTMENT

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

Telcom Wireless: 020-2183718, 020-2101370, 020-2103696
Mobile Line: 0724 253 398, 0723 363 010, 0735 013 046
Incident Line: 0786 101 100

P. O. Box 67839 - 00200
Popo Road, Nairobi, Kenya
Email: dgnema@nema.go.ke
Website: www.nema.go.ke

NEMA/5/2/Vol. XXVII **4th June, 2018**

Kenya Power and Lighting Company
P.O Box 67839-00200
NAIROBI, KENYA

Attn: Eng. James Gitau- Chief Engineer, Safety Health and Environment.

RE: REQUEST FOR CLEARANCE LETTER FOR AFD/EU/EIB-LAST MILE CONNECTIVITY PROJECT.

Reference is made to your letter dated 18th May, 2018 on the above subject.

Following a review of the documents submitted for AFD/EU/EIB-Last Mile Connectivity Project [LMCP] that entails service connection and installation of distribution transformers across 32 selected counties that is to be funded by agency francaise de development, [AFD], European union and European Investment Bank [EIB].project aim at connecting a total of **300,053** customers to increase access to electricity, improve reliability of electricity service and strengthen KPLC financial situation.

The project is anticipated to have negligible negative environmental and social impacts .An environmental and social management framework has been prepared and environmental and social screening shall be done to guide project implementation.

You are however required to:

1. Obtain requisite approvals from respective County Governments, the Ministry of Energy, the Energy Regulatory Commission and all other relevant Authorities prior to commencement of works.

2. Comply with the relevant principal laws, by-laws and guidelines issued for development of such a project within the jurisdiction of the County Governments; Ministry of Lands, Housing and Urban Development; Ministry of Transport and Infrastructure; Ministry of Health, Ministry of Energy; Energy Regulatory Commission; the Water Resources Authority; Kenya Forest Service; National Construction Authority; and other relevant Authorities.

3. Ensure that the design of the equipment and site comply with the Environmental Health and Safety Policy of the electric power sector.

Our Environment, Our Life, Our Responsibility

ISO 9001: 2008 Certified

4. Conduct comprehensive consultation with the project stakeholders and persons to be affected by the proposed project.

5. Ensure excavated areas are backfilled and restored to a state equivalent to the original state or improved.

6. Ensure that all excavated material and debris is collected, re-used and where need be; disposed off as per the Environmental Management and Coordination (Waste Management) Regulations, 2006.

7. Ensure strict adherence to the provisions of Environmental Management and Coordination (Noise and Excessive Vibration Pollution Control) Regulations, 2009.

8. Put in place an appropriate traffic management plan that will ensure smooth traffic flow on the narrow estate roads.

9. Ensure strict adherence to the Occupational Safety and Health Act (OSHA), 2007.

10. Ensure that construction workers are provided with adequate personal protection equipment (PPE), sanitary facilities as well as adequate training.

11. The proponent shall ensure that construction activities are undertaken during the day (and not at night) between 0800 hours and 1800 hours and on Saturdays between 0800hours and 1300hours. No works shall be undertaken on Sundays and that transportation of construction materials to and from the site are undertaken during weekdays and Saturdays only during the hours specified herein.

12. Give emphasis to the control of dust, noise, vibration and occupational hazards.

13. Give appropriate notification to the neighbouring persons to limit the nuisance caused.

Thank you for your willingness to comply.

MARGARET NJUKI
FOR: DIRECTOR GENERAL

7. Annex 8: AFD/EU/EIB LMCP Transformers Distribution In The Constituencies

No.	County	Constituency	NEW TRANSFORMERS UNDER AFD/EU	TRANSFORMERS FOR MAXIMIZATION UNDER AFD/EU/EIB
1	BOMET	Bomet Central	1	17
		Bomet East	2	22
		Chepalungu	2	25
		Konoin	1	19
		Sotik	1	19
		SUB-TOTAL	**7**	**102**
2	BUNGOMA	Bumula	7	56
		Kabuchai	3	38
		Kanduyi	1	13
		Kimilili	1	18
		Mt.Elgon	3	42
		Sirisia	15	21
		Tongaren	3	37
		Webuye East	1	19
		Webuye West	2	21
		SUB-TOTAL	**36**	**265**
3	BUSIA	Budalangi	1	11
		Butula	2	27
		Funyula	2	27
		Matayos	1	13
		Nambale	4	24
		Teso North	1	18
		Teso South	1	14
		SUB-TOTAL	**12**	**134**
4	EMBU	Manyatta	1	9
		Mbeere North	2	23
		Mbeere South	2	23
		Runyenjes	1	18
		SUB-TOTAL	**6**	**73**
5	HOMA BAY	Homa Bay Town	1	15
		Kabondo Kasipul	2	25
		Karachuonyo	3	40
		Kasipul	2	21
		Mbita	1	11
		Ndhiwa	2	31
		Rangwe	14	23
		Suba	18	36
		SUB-TOTAL	**43**	**202**
6	KAJIADO	Kajiado Central	1	10
		Kajiado East	1	9
		Kajiado North	1	9

No.	County	Constituency	NEW TRANSFORMERS UNDER AFD/EU	TRANSFORMERS FOR MAXIMIZATION UNDER AFD/EU/EIB
		Kajiado South	1	9
		Kajiado West	1	9
		SUB-TOTAL	**5**	**46**
7	KAKAMEGA	Butere	3	35
		Ikolomani	2	32
		Khwisero	2	26
		Likuyani	1	15
		Lugari	3	35
		Lurambi	1	9
		Malava	4	46
		Matungu	5	34
		Mumias East	10	25
		Mumias West	1	19
		Navakholo	24	24
		Shinyalu	2	31
		SUB-TOTAL	**58**	**331**
8	KERICHO	Ainamoi	1	10
		Belgut	1	13
		Bureti	2	20
		Kipkelion East	1	16
		Kipkelion West	19	8
		Sigowet/Soin	1	16
		SUB-TOTAL	**25**	**83**
9	KILIFI	Ganze	6	39
		Kaloleni	2	25
		Kilifi North	1	13
		Kilifi South	1	9
		Magarini	3	36
		Malindi	1	9
		Rabai	2	26
		SUB-TOTAL	**16**	**157**
10	KIRINYAGA	Gichugu	1	13
		Kirinyaga Central	1	11
		Mwea	1	16
		Ndia	1	14
		SUB-TOTAL	**4**	**54**
11	KISII	Bobasi	1	13
		Bomachoge Borabu	7	15
		Bomachoge Chache	7	17
		Bonchari	1	19
		Kitutu Chache North	3	35
		Kitutu Chache South	1	16
		Nyaribari Chache	1	11
		Nyaribari Masaba	2	24
		South Mugirango	2	27
		SUB-TOTAL	**25**	**177**
12	KISUMU	Kisumu Central	1	9

No.	County	Constituency	NEW TRANSFORMERS UNDER AFD/EU	TRANSFORMERS FOR MAXIMIZATION UNDER AFD/EU/EIB
		Kisumu East	1	9
		Kisumu West	1	9
		Muhoroni	1	18
		Nyakach	1	15
		Nyando	1	19
		Seme	2	23
		SUB-TOTAL	**8**	**102**
13	KITUI	Kitui Central	1	16
		Kitui East	1	19
		Kitui Rural	34	9
		Kitui South	24	35
		Kitui West	1	18
		Mwingi Central	1	19
		Mwingi North	21	36
		Mwingi West	2	27
		SUB-TOTAL	**85**	**179**
14	KWALE	Kinango	4	47
		Lungalunga	3	43
		Matuga	1	16
		Msambweni	1	9
		SUB-TOTAL	**9**	**115**
15	LAIKIPIA	Laikipia East	1	9
		Laikipia North	2	20
		Laikipia West	1	18
		SUB-TOTAL	**4**	**47**
16	MAKUENI	Kaiti	21	11
		Kibwezi East	3	34
		Kibwezi West	2	23
		Kilome	1	19
		Makueni	2	25
		Mbooni	3	38
		SUB-TOTAL	**32**	**150**
17	MERU	Buuri	1	14
		Central Imenti	2	20
		Igembe Central	11	40
		Igembe North	30	12
		Igembe South	2	28
		North Imenti	1	14
		South Imenti	3	44
		Tigania East	1	9
		Tigania West	2	23
		SUB-TOTAL	**53**	**204**
18	MIGORI	Awendo	7	33
		Kuria East	33	1
		Kuria West	9	30
		Nyatike	6	39
		Rongo	1	11

No.	County	Constituency	NEW TRANSFORMERS UNDER AFD/EU	TRANSFORMERS FOR MAXIMIZATION UNDER AFD/EU/EIB
		Suna East	2	24
		Suna West	2	24
		Uriri	1	11
		SUB-TOTAL	**61**	**173**
19	MURANG'A	Gatanga	1	17
		Kandara	1	19
		Kangema	1	13
		Kigumo	1	18
		Kiharu	1	13
		Maragwa	1	15
		Mathioya	1	14
		SUB-TOTAL	**7**	**109**
20	NAKURU	Bahati	1	9
		Gilgil	1	9
		Kuresoi North	3	38
		Kuresoi South	11	36
		Molo	1	9
		Naivasha	1	9
		Nakuru Town East	1	9
		Nakuru Town West	1	9
		Njoro	1	17
		Rongai	1	12
		Subukia	1	19
		SUB-TOTAL	**23**	**176**
21	NANDI	Aldai	3	35
		Chesumei	2	21
		Emgwen	1	11
		Mosop	2	20
		Nandi Hills	1	18
		Tinderet	2	32
		SUB-TOTAL	**11**	**137**
22	NAROK	Emurua Dikirr	32	5
		Kilgoris	2	32
		Narok East	6	18
		Narok North	1	9
		Narok South	28	17
		Narok West	65	-
		SUB-TOTAL	**134**	**81**
23	NYAMIRA	Borabu	1	12
		Kitutu Masaba	1	17
		North Mugirango	2	21
		West Mugirango	1	14
		SUB-TOTAL	**5**	**64**
24	NYANDARUA	Kinangop	1	15
		Kipipiri	1	19
		Ndaragwa	1	15
		Ol Jorok	1	13

No.	County	Constituency	NEW TRANSFORMERS UNDER AFD/EU	TRANSFORMERS FOR MAXIMIZATION UNDER AFD/EU/EIB
		Ol Kalou	1	11
		SUB-TOTAL	**5**	**73**
25	NYERI	Kieni	1	18
		Mathira	1	12
		Mukurweini	1	13
		Nyeri Town	1	9
		Othaya	1	11
		Tetu	1	11
		SUB-TOTAL	**6**	**74**
26	SIAYA	Alego Usonga	1	18
		Bondo	1	14
		Gem	2	23
		Rarieda	2	32
		Ugenya	2	28
		Ugunja	2	21
		SUB-TOTAL	**10**	**136**
27	TAITA TAVETA	Mwatate	1	13
		Taveta	1	16
		Voi	1	11
		Wundanyi	1	14
		SUB-TOTAL	**4**	**54**
28	THARAKA - NITHI	Chuka/Igambang'om	1	12
		Maara	1	12
		Tharaka	21	12
		SUB-TOTAL	**23**	**36**
29	TRANS NZOIA	Cherangany	1	17
		Endebess	6	16
		Kiminini	1	12
		Kwanza	2	21
		Saboti	1	10
		SUB-TOTAL	**11**	**76**
30	UASIN GISHU	Ainabkoi	2	9
		Kapseret	1	9
		Kesses	1	9
		Moiben	1	9
		Soy	1	12
		Turbo	1	9
		SUB-TOTAL	**7**	**57**
31	VIHIGA	Emuhaya	11	7
		Hamisi	1	17
		Luanda	1	15
		Sabatia	1	12
		Vihiga	1	9
		SUB-TOTAL	**15**	**60**
32	WEST POKOT	Kacheliba	98	-
		Kapenguria	2	25
		Pokot South	43	13

No.	County	Constituency	NEW TRANSFORMERS UNDER AFD/EU	TRANSFORMERS FOR MAXIMIZATION UNDER AFD/EU/EIB
		Sigor	47	-
		SUB-TOTAL	**190**	**38**
GRAND TOTAL			**940**	**3,765**

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Section VIII. General Conditions (GC)

[Name of Employer]

[Name of Contract]

The General Conditions that follow are the Multilateral Development Banks Harmonized Edition of the Conditions of Contract for Construction prepared and copyrighted by the International Federation of Consulting Engineers (*Fédération Internationale des Ingénieurs-Conseils*, or FIDIC), FIDIC 2010-All rights reserved. This publication is exclusive for the use of EIB's Beneficiaries and their project implementing agencies as provided under the License Agreement between the Agence Française de Développement and FIDIC, and, consequently, no part of this publication may be reproduced, translated, adapted, stored in a retrieval system or communicated, in any form or by any means, whether mechanical, electronic, magnetic, photocopying, recording or otherwise, without prior permission in writing from FIDIC, except by the Employer identified above and only for the exclusive purpose of preparing these Standard Bidding Documents for the Contract also identified above.

[This section should not be modified and any modification on the General Conditions should be specified in Section IX, Particular Conditions]

General Conditions

1. General Provisions

1.1 Definitions

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

1.1.1 The Contract

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

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

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

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

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

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

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

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

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

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

1.1.2 Parties 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 Contract Data 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 Tender 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 Contract Data, or other person appointed from time to time by the Employer and notified to the Contractor under Sub-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 Sub-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 Sub-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 Sub-Clause 20.2 [Appointment of the Dispute Board] or Sub-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 federation of consulting engineers.

1.1.2.11 "Bank" means the financing institution (if any) named in the Contract Data.

1.1.2.12 "Borrower" means the person (if any) named as the borrower in the Contract Data.

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 Tender.

1.1.3.2 "Commencement Date" means the date notified under Sub-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 Sub-Clause 8.2 [Time for Completion], as stated in the Contract Data (with any extension under Sub-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 Clause 9 [Tests on Completion] before the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.5 "Taking-Over Certificate" means a certificate issued under Clause 10 [Employer's Taking Over].

1.1.3.6 "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 Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects], which extends over 365 days except if otherwise stated in the Contract Data (with any extension under Sub-Clause 11.3 [Extension of Defects Notification Period]), calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [Taking Over of the Works and Sections]..

1.1.3.8 "Performance Certificate" means the certificate issued under Sub-Clause 11.9 [Performance Certificate].

1.1.3.9 "Day" means a calendar day and "year" means 365 days.

1.1.4 Money and Payments

1.1.4.1 "Accepted Contract Amount" means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

1.1.4.2 "Contract Price" means the price defined in Sub-Clause 14.1 [The Contract Price], and includes adjustments in accordance with the Contract.

1.1.4.3 "Cost" means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

1.1.4.4 "Final Payment Certificate" means the payment certificate issued under Sub-Clause 14.13 [Issue of Final Payment Certificate].

1.1.4.5 "Final Statement" means the statement defined in Sub-Clause 14.11 [Application for Final Payment Certificate].

1.1.4.6 "Foreign Currency" means a currency in which part (or all) of the Contract Price is payable, but not the Local Currency.

1.1.4.7 "Interim Payment Certificate" means a payment certificate issued under Clause 14 [Contract Price and Payment], 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 Clause 14 [Contract Price and Payment].

1.1.4.10 "Provisional Sum" means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [Provisional Sums]..

1.1.4.11 "Retention Money" means the accumulated retention moneys which the Employer retains under Sub-Clause 14.3 [Application for Interim

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

1.1.4.12 "Statement" means a statement submitted by the Contractor as part of an application, under Clause 14 [Contract Price and Payment], for a payment certificate.

1.1.5 Works and Goods

1.1.5.1 "Contractor's Equipment" means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes Temporary Works, Employer's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

1.1.5.2 "Goods" means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

1.1.5.3 "Materials" means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

1.1.5.4 "Permanent Works" means the permanent works to be executed by the Contractor under the Contract.

1.1.5.5 "Plant" means the apparatus, machinery and other equipment intended to form or forming part of the Permanent Works, including vehicles purchased for the Employer and relating to the construction or operation of the Works.

1.1.5.6 "Section" means a part of the Works specified in the Contract Data as a Section (if any).1.1.5.7 "Temporary Works" means all temporary works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

1.1.5.8 "Works" mean the Permanent Works and the Temporary Works, or either of them as appropriate.

1.1.6 Other Definitions

1.1.6.1 "Contractor's Documents" means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

1.1.6.2 "Country" means the country in which the Site (or most of it) is located, where the Permanent Works are to be executed.

1.1.6.3 "Employer's Equipment" means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Employer.

1.1.6.4 "Force Majeure" is defined in Clause 19 [Force Majeure].

1.1.6.5 "Laws" means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.

1.1.6.6 "Performance Security" means the security (or securities, if any) under Sub-Clause 4.2 [Performance Security]..

1.1.6.7 "Site" means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant and Materials

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

1.1.6.8 "Unforeseeable" means not reasonably foreseeable by an experienced contractor by the Base Date.

1.1.6.9 "Variation" means any change to the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments].

1.1.6.10 "Notice of Dissatisfaction" means the notice given by either Party to the other under Sub-Clause 20.4 [Obtaining Dispute Board's Decision] indicating its dissatisfaction and intention to commence arbitration.

1.2 Interpretation In the Contract, except where the context requires otherwise:

(a) Words indicating one gender include all genders;

(b) Words indicating the singular also include the plural and words indicating the plural also include the singular;

(c) Provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing;

(d) "Written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and

(e) The word "tender" is synonymous with "bid" and "tenderer" with "Bidder" and the words "tender documents" with "bidding documents.

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

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

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

(a) In writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Contract Data; and

(b) Delivered, sent or transmitted to the address for the recipient's communications as stated in the Contract Data. However:

(i) If the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and

(ii) If the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a

copy to the other Party. When a notice is issued to a Party, by the other Party or the Engineer, a copy shall be sent to the Engineer or the other Party, as the case may be.

1.4 Law and Language

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

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

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

1.5 Priority of Documents

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

(a) The Contract Agreement (if any);

(b) The Letter of Acceptance;

(c) The Letter of Tender;

(d) The Particular Conditions – Part A;

(e) The Particular Conditions – Part B;

(f) These General Conditions;

(g) The Specification;

(h) The Drawings; and

(i) The Schedules and any other documents forming part of the Contract.

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

1.6 Contract Agreement

The Parties shall enter into a Contract Agreement within 28 days but not earlier than 14 days after the Contractor receives the Letter of Acceptance, unless the Particular Conditions establish otherwise. The Contract Agreement shall be based upon the form annexed to the Particular Conditions. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer.

1.7 Assignment

Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party:

(a) May assign the whole or any part with the prior agreement of the other Party, a member to its Joint Venture or to its subsidiary operating in the employer's country, as long as the assignee meets, on its own, the initial qualification requirements. Assignment of works to any other entity will only be allowed under special circumstances at the sole discretion and with the prior agreement of the other Party. and

(b) May, as security in favour of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract.

1.8 Care and Supply of Documents

The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, two copies of the Contract and of each

subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.

Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer six copies of each of the Contractor's Documents.

The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.

If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

1.9 Delayed Drawings or Instructions

The Contractor shall give notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and the nature and amount of the delay or disruption likely to be suffered if it is late.

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

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

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

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

1.10 Employer's Use of Contractor's Documents

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

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

(a) Apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works;

(b) Entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works; and

(c) In the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.

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

1.11 Contractor's Use of Employer's Documents

As between the Parties, the Employer shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Employer. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract. They shall not, without the Employer's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

1.12 Confidential Details

The Contractor's and the Employer's Personnel shall disclose all such confidential and other information as may be reasonably required in order to verify compliance with the Contract and allow its proper implementation.

Each of them shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.

1.13 Compliance with Laws

The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions:

(a) The Employer shall have obtained (or shall obtain) the planning, zoning, building permit or similar permission for the Permanent Works, and any other permissions described in the Specification as having been (or to be) obtained by the Employer; and the Employer shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and

(b) The Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Employer harmless against and from the consequences of any failure to do so, unless the Contractor is impeded to accomplish these actions and shows evidence of its diligence.

1.14 Joint and Several Liability

If the Contractor constitutes (under applicable Laws) a joint venture, consortium or other unincorporated grouping of two or more persons:

(a) These persons shall be deemed to be jointly and severally liable to the Employer for the performance of the Contract;

(b) These persons shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these persons; and

(c) The Contractor shall not alter its composition or legal status without the prior consent of the Employer.

1.15 Inspections and Audit by the Bank

The Contractor shall permit the Bank and/or persons appointed by the Bank to inspect the Site and/or the Contractor's accounts and records relating to the performance of the Contract and to have such accounts and records audited by auditors appointed by the Bank if required by the Bank.

2. The Employer

2.1 Right of Access to the Site

The Employer shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the Contract Data. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Employer is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Employer shall do so in the time and manner stated in the Specification. However, the Employer may withhold any such right or possession until the Performance Security has been received.

If no such time is stated in the Contract Data, the Employer shall give the Contractor right of access to, and possession of, the Site within such times as required to enable the Contractor to proceed without disruption in accordance with the programme submitted under Sub-Clause 8.3 [Programme].

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

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

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

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

2.2 Permits, Licences or Approvals

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

(a) Copies of the Laws of the Country which are relevant to the Contract but are not readily available, and

(b) Any permits, licences or approvals required by the Laws of the Country:

(i) Which the Contractor is required to obtain under Sub-Clause 1.13 [Compliance with Laws];

(ii) For the delivery of Goods, including clearance through customs, and

(iii) For the export of Contractor's Equipment when it is removed from the Site.

2.3 Employer's Personnel

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

(a) Co-operate with the Contractor's efforts under Sub-Clause 4.6 [Co-operation]; and

(b) Take actions similar to those which the Contractor is required to take under sub-paragraphs (a), (b) and (c) of Sub-Clause 4.8 [Safety Procedures] and under Sub-Clause 4.18 [Protection of the Environment].

2.4 Employer's Financial Arrangements

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

In addition, if the Bank has notified to the Borrower that the Bank has suspended disbursements under its loan, which finances in whole or in part the execution of the Works, the Employer shall give notice of such suspension to the Contractor with detailed particulars, including the date of such notification, with a copy to the Engineer, within 7 days of the Borrower having received the suspension notification from the Bank. If alternative funds will be available in appropriate currencies to the Employer to continue making payments to the Contractor beyond a date 60 days after the date of Bank notification of the suspension, the Employer shall provide reasonable evidence in his notice of the extent to which such funds will be available.

2.5 Employer's Claims

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

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

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

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

3. The Engineer

3.1 Engineer's Duties and Authority

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

The Engineer shall have no authority to amend the Contract.

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

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

Except as otherwise stated in these Conditions:

(a) Whenever carrying out duties or exercising authority, specified in or implied by the Contract, the Engineer shall be deemed to act for the Employer;

(b) The Engineer has no authority to relieve either Party of any duties, obligations or responsibilities under the Contract;

(c) Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, including responsibility for errors, omissions, discrepancies and non-compliances; and

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

The following provisions shall apply:

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

(a) Sub-Clause 4.12: agreeing or determining an extension of time and/or additional cost;

(b) Sub-Clause 13.1: instructing a Variation, except;

(i) In an emergency situation as determined by the Engineer, or

(ii) If such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the Contract Data;

(c) Sub-Clause 13.3: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 13.1 or 13.2;

(d) Sub-Clause 13.4: Specifying the amount payable in each of the applicable currencies

Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or

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

3.2 Delegation by the Engineer

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

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

(a) Any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Engineer to reject the work, Plant or Materials;

(b) If the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

3.3 Instructions of the Engineer

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

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

(a) Gives an oral instruction;

(b) Receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction; and

(c) Does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation;

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

3.4 Replacement of the Engineer

If the Employer intends to replace the Engineer, the Employer shall, not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended replacement Engineer. If the Contractor considers the intended replacement Engineer to be unsuitable, he has the

right to raise objection against him by notice to the Employer, with supporting particulars, and the Employer shall give full and fair consideration to this objection.

3.5 Determinations

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

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

4. The Contractor

4.1 Contractor's General Obligations

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

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

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

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

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

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

(a) The Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the procedures specified in the Contract;

(b) These Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [Law and Language], and shall include additional information required by the Engineer to add to the Drawings for co-ordination of each Party's designs;

(c) The Contractor shall be responsible for this part and it shall, when the Works are completed, be fit for such purposes for which the part is intended as are specified in the Contract; and

(d) Prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the "as-built" documents and, if applicable, operation

and maintenance manuals in accordance with the Specification and in sufficient detail for the Employer to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.

4.2 Performance Security

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

The Contractor shall deliver the Performance Security to the Employer within 28 days but not earlier than 14 days after receiving the Letter of Acceptance, and shall send a copy to the Engineer. The Performance Security shall be issued by a reputable bank or financial institution selected by the Contractor, and shall be in the form annexed to the Particular Conditions, as stipulated by the Employer in the Contract Data, or in another form approved by the Employer.

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

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

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

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

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

4.3 Contractor's Representative

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

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

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

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

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

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

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

4.4 Subcontractors

The Contractor shall not subcontract the whole of the Works.

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

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

(b) The prior consent of the Engineer shall be obtained to other proposed Subcontractors;

(c) The Contractor shall give the Engineer not less than 28 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site; and

(d) Each subcontract shall include provisions which would entitle the Employer to require the subcontract to be assigned to the Employer under Sub-Clause 4.5 [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under Sub-Clause 15.2 [Termination by Employer].

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

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

4.5 Assignment of Benefit of Subcontract

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

4.6 Co-operation

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

(a) The Employer's Personnel;

(b) Any other contractors employed by the Employer; and

(c) The personnel of any legally constituted public authorities;

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

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

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

4.7 Setting Out

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

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

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

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

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

4.8 Safety Procedures

The Contractor shall:

(a) Comply with all applicable safety regulations;

(b) Take care for the safety of all persons entitled to be on the Site;

(c) Use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons;

(d) Provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 10 [Employer's Taking Over]; and

(e) Provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

4.9 Quality Assurance

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

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

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

4.10 Site Data

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

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

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

(b) The hydrological and climatic conditions;

(c) The extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects;

(d) The Laws, procedures and labour practices of the Country; and

(e) The Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.

4.11 Sufficiency of the Accepted Contract Amount

The Contractor shall be deemed to:

(a) Have satisfied himself as to the correctness and sufficiency of the Accepted Contract Amount; and

(b) Have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in Sub-Clause 4.10 [Site Data].

Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.

4.12 Unforeseeable Physical Conditions

In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.

If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Engineer as soon as practicable.

This notice shall describe the physical conditions, so that they can be inspected by the Engineer, and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Engineer may give. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.

If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to notice under Sub-Clause 20.1 [Contractor's Claims] to:

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost, which shall be included in the Contract Price.

Upon receiving such notice and inspecting and/or investigating these physical conditions, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Engineer may also review whether other physical conditions in similar parts of the Works (if any) were more favourable than could reasonably have been foreseen when the Contractor submitted the Tender. If and to the extent that these more favourable conditions were encountered, the Engineer may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under sub-paragraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.

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

4.13 Rights of Way and Facilities

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

4.14 Avoidance of Interference

The Contractor shall not interfere unnecessarily or improperly with:

(a) The convenience of the public; or

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

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

4.15 Access Route

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

Except as otherwise stated in these Conditions:

(a) The Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;

(b) The Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;

(c) The Employer shall not be responsible for any claims which may arise from the use or otherwise of any access route;

(d) The Employer does not guarantee the suitability or availability of particular access routes; and

(e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.

4.16 Transport of Goods

Unless otherwise stated in the Particular Conditions:

(a) The Contractor shall give the Engineer not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;

(b) The Contractor shall be responsible for packing, loading, transporting, receiving, unloading, storing and protecting all Goods and other things required for the Works; and

(c) The Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods, and shall negotiate and pay all claims arising from their transport.

4.17 Contractor's Equipment

The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.

4.18 Protection of the Environment

The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

The Contractor shall ensure that emissions, surface discharges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.

4.19 Electricity, Water and Gas

The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require for his construction activities and to the extent defined in the Specifications, for the tests.

The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specification. The Contractor shall, at his risk and cost, provide any apparatus necessary for his use of these services and for measuring the quantities consumed.

The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [Employer's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Employer.

4.20 Employer's Equipment and Free-Issue Materials

The Employer shall make the Employer's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:

(a) The Employer shall be responsible for the Employer's Equipment; except that

(b) The Contractor shall be responsible for each item of Employer's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.

The appropriate quantities and the amounts due (at such stated prices) for the use of Employer's Equipment shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [Employer's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Employer.

The Employer shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Specification. The Employer shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them, and shall promptly give notice to the Engineer of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Employer shall immediately rectify the notified shortage, defect or default.

After this visual inspection, the free-issue materials shall come under the care, custody and control of the Contractor. The Contractor's obligations of inspection, care, custody and control shall not relieve the Employer of liability for any shortage, defect or default not apparent from a visual inspection.

4.21 Progress Reports

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

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

Each report shall include:

(a) Charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]);

(b) Photographs showing the status of manufacture and of progress on the Site;

(c) For the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:

(i) Commencement of manufacture;

(ii) Contractor's inspections;

(iii) Tests; and

(iv) Shipment and arrival at the Site;

(d) The details described in Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment];

(e) Copies of quality assurance documents, test results and certificates of Materials;

(f) List of notices given under Sub-Clause 2.5 [Employer's Claims] and notices given under Sub-Clause 20.1 [Contractor's Claims];

(g) Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and

(h) Comparisons of actual and planned progress, with details of any events or circumstances which may jeopardise the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

4.22 Security of the Site

Unless otherwise stated in the Particular Conditions:

(a) The Contractor shall be responsible for keeping unauthorised persons off the Site, and

(b) Authorised persons shall be limited to the Contractor's Personnel and the Employer's Personnel; and to any other personnel notified to the Contractor, by the Employer or the Engineer, as authorised personnel of the Employer's other contractors on the Site.

4.23 Contractor's Operations on Site

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

and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacent land.

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

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

4.24 Fossils

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

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

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost, which shall be included in the Contract Price.

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

5. Nominated Subcontractors

5.1 Definition of "nominated Subcontractor"

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

(a) Who is stated in the Contract as being a nominated Subcontractor; or

(b) Whom the Engineer, under Clause 13 [Variations and Adjustments], instructs the Contractor to employ as a Subcontractor subject to Sub-Clause 5.2 [Objection to Notification].

5.2 Objection to Nomination

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

(a) There are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength;

(b) The nominated Subcontractor does not accept to indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, his agents and employees; or

(c) The nominated Subcontractor does not accept to enter into a subcontract which specifies that, for the subcontracted work (including design, if any), the nominated Subcontractor shall:

(i) Undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract;

(ii) Indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities; and

(iii) Be paid only if and when the Contractor has received from the Employer payments for sums due under the Subcontract referred to under Sub-Clause 5.3 [Payment to nominated Subcontractors].

5.3 Payments to nominated Subcontractors

The Contractor shall pay to the nominated Subcontractor the amounts shown on the nominated Subcontractor's invoices approved by the Contractor which the Engineer certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with sub-paragraph (b) of Sub-Clause 13.5 [Provisional Sums], except as stated in Sub-Clause 5.4 [Evidence of Payments].

5.4 Evidence of Payments

Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

(a) Submits this reasonable evidence to the Engineer, or

(b)

(i) Satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts; and

(ii) Submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement,

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

6. Staff and Labour

6.1 Engagement of Staff and Labour

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

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour with appropriate qualifications and experience from sources within the Country.

6.2 Rates of Wages and Conditions of Labour

The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.

The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the Laws of the Country for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.

6.3 Persons in the Service of Employer

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Employer's Personnel.

6.4 Labour Laws

The Contractor shall comply with all the relevant labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.

The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

6.5 Working Hours

No work shall be carried out on the Site on locally recognised days of rest, or outside the normal working hours stated in the Contract Data, unless:

(a) Otherwise stated in the Contract;

(b) The Engineer gives consent; or

(c) The work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer.

6.6 Facilities for Staff and Labour

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.

The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

6.7 Health and Safety

The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Engineer may reasonably require.

HIV-AIDS Prevention. The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

The Contractor shall throughout the contract (including the Defects Notification Period): (i) conduct Information, Education and Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labour (including all the Contractor's employees, all Subcontractors and any other Contractor's or Employer's personnel employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behaviour with respect to, of Sexually Transmitted Diseases (STD) - or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular; (ii) provide male or female condoms for all Site staff and labour as appropriate; and (iii) provide for STI and HIV/AIDS screening, diagnosis, counselling and referral to a dedicated national STI and HIV/AIDS programme, (unless otherwise agreed) of all Site staff and labour.

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

6.8 Contractor's Superintendence

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

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

6.9 Contractor's Personnel

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

(a) Persists in any misconduct or lack of care;

(b) Carries out duties incompetently or negligently;

(c) Fails to conform with any provisions of the Contract; or

(d) Persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

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

6.10 Records of Contractor's Personnel and Equipment

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

6.11 Disorderly Conduct

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

6.12 Foreign Personnel

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.

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

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

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 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.

6.16 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 thereof by Contractor's Personnel.

6.17 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.

6.18 Festivals and Religious Customs

The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.

6.19 Funeral Arrangements

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 Prohibition of Forced or Compulsory Labour

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 Prohibition of Harmful Child Labour

The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where the relevant labour laws of the Country have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.

6.22 Employment Records of Workers

The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment].

6.23 Workers' Organisations

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

6.24 Non-Discrimination and Equal Opportunity

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

7. Plant, Materials and Workmanship

7.1 Manner of Execution

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

(a) In the manner (if any) specified in the Contract;

(b) In a proper workmanlike and careful manner, in accordance with recognised good practice; and

(c) With properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract.

7.2 Samples

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

(a) Manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost; and

(b) Additional samples instructed by the Engineer as a Variation.

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

7.3 Inspection

The Employer's Personnel shall at all reasonable times:

(a) Have full access to all parts of the Site and to all places from which natural Materials are being obtained; and

(b) During production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of Materials.

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

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

7.4 Testing

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

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

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

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

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

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

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

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

7.5 Rejection

If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.

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

7.6 Remedial Work

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

(a) Remove from the Site and replace any Plant or Materials which is not in accordance with the Contract;

(b) Remove and re-execute any other work which is not in accordance with the Contract; and

(c) Execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.

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

If the Contractor fails to comply with the instruction, the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall

subject to Sub-Clause 2.5 [Employer's Claims] pay to the Employer all costs arising from this failure.

7.7 Ownership of Plant and Materials

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

(a) When it is incorporated in the Works;

(b) When the Contractor is paid the corresponding value of the Plant and Materials under Sub-Clause 8.10 [Payment for Plant and Materials in Event of Suspension].

7.8 Royalties

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

(a) Natural Materials obtained from outside the Site, and

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

8. Commencement, Delays and Suspension

8.1 Commencement of Works

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

(a) Signature of the Contract Agreement by both Parties, and if required, approval of the Contract by relevant authorities of the Country;

(b) Delivery to the Contractor of reasonable evidence of the Employer's financial arrangements (under Sub-Clause 2.4 [Employer's Financial Arrangements]);

(c) Except if otherwise specified in the Contract Data, effective access to and possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.13 [Compliance with Laws] as required for the commencement of the Works,

(d) Receipt by the Contractor of the Advance Payment under Sub-Clause 14.2 [Advance Payment] provided that the corresponding bank guarantee has been delivered by the Contractor.

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

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

8.2 Time for Completion

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

(a) Achieving the passing of the Tests on Completion; and

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

8.3 Programme

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

(a) The order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing;

(b) Each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]);

(c) The sequence and timing of inspections and tests specified in the Contract; and

(d) A supporting report which includes:

(i) A general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works; and

(ii) Details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.

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

The Contractor shall promptly give notice to the Engineer of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price or delay the execution of the Works. The Engineer may require the Contractor to submit an estimate of the anticipated effect of the future event or circumstances, and/or a proposal under Sub-Clause 13.3 [Variation Procedure].

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

8.4 Extension of Time for Completion

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

(a) A Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 13.3 [Variation Procedure]) or other substantial change in the quantity of an item of work included in the Contract;

(b) A cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions;

(c) Exceptionally adverse climatic conditions;

(d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions; or

(e) Any delay, impediment or prevention caused by or attributable to the Employer, the Employer's Personnel, or the Employer's other contractors.

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

8.5 Delays Caused by Authorities

If the following conditions apply, namely:

(a) The Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country;

(b) These authorities delay or disrupt the Contractor's work; and

(c) The delay or disruption was Unforeseeable,

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

8.6 Rate of Progress

If, at any time:

(a) Actual progress is too slow to complete within the Time for Completion; and/or

(b) Progress has fallen (or will fall) behind the current programme under Sub-Clause 8.3 [Programme];

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

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

Additional costs of revised methods including acceleration measures, instructed by the Engineer to reduce delays resulting from causes listed under Sub-Clause 8.4

[Extension of Time for Completion] shall be paid by the Employer, without generating, however, any other additional payment benefit to the Contractor.

8.7 Delay Damages

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

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

8.8 Suspension of Work

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

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

8.9 Consequences of Suspension

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

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost, which shall be included in the Contract Price.

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

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

8.10 Payment for Plant and Materials in Event of Suspension

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

(a) The work on Plant or delivery of Plant and/or Materials has been suspended for more than 28 days; and

(b) The Contractor has marked the Plant and/or Materials as the Employer's property in accordance with the Engineer's instructions.

8.11 Prolonged Suspension

If the suspension under Sub-Clause 8.8 [Suspension of Work] has continued for more than 84 days, the Contractor may request the Engineer's permission to proceed. If the Engineer does not give permission within 28 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 13 [Variations and Adjustments] of the affected part of the

Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 [Termination by Contractor].

8.12 Resumption of Work

After the permission or instruction to proceed is given, the Contractor and the Engineer shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension after receiving from the Engineer an instruction to this effect under Clause 13 [Variations and Adjustments].

9. Tests on Completion

9.1 Contractor's Obligations

The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub-Clause 7.4 [Testing], after providing the documents in accordance with sub-paragraph (d) of Sub-Clause 4.1 [Contractor's General Obligations].

The Contractor shall give to the Engineer not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.

In considering the results of the Tests on Completion, the Engineer shall make allowances for the effect of any use of the Works by the Employer on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.

9.2 Delayed Tests

If the Tests on Completion are being unduly delayed by the Employer, Sub-Clause 7.4 [Testing] (fifth paragraph) and/or Sub-Clause 10.3 [Interference with Tests on Completion] shall be applicable.

If the Tests on Completion are being unduly delayed by the Contractor, the Engineer may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the Tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.

If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Employer's Personnel may proceed with the Tests at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.

9.3 Retesting

If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 [Rejection] shall apply, and the Engineer or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

9.4 Failure to Pass Tests on Completion

If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [Retesting], the Engineer shall be entitled to:

(a) Order further repetition of Tests on Completion under Sub-Clause 9.3 [Retesting];

(b) If the failure deprives the Employer of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Employer shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause 11.4 [Failure to Remedy Defects]; or

(c) Issue a Taking-Over Certificate, if the Employer so requests.

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

10. Employer's Taking Over

10.1 Taking Over of the Works and Sections

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

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

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

(a) Issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or

(b) Reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.

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

10.2 Taking Over of Parts of the Works

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

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

(a) The part which is used shall be deemed to have been taken over as from the date on which it is used;

(b) The Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Employer, and

(c) If requested by the Contractor, the Engineer shall issue a Taking-Over Certificate for this part.

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

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

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

10.3 Interference with Tests on Completion

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

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

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

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

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

10.4 Surfaces Requiring Reinstatement

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

11. Defects Liability

11.1 Completion of Outstanding Work and Remedying Defects

In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fair wear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:

(a) Complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer; and

(b) Execute all work required to remedy defects or damage, as may be notified by (or on behalf of) the Employer on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).

If a defect appears or damage occurs, the Contractor shall be notified accordingly, by (or on behalf of) the Employer.

11.2 Cost of Remedying Defects

All work referred to in sub-paragraph (b) of Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:

(a) Any design for which the Contractor is responsible;

(b) Plant, Materials or workmanship not being in accordance with the Contract; or

(c) Failure by the Contractor to comply with any other obligation.

If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Employer, and Sub-Clause 13.3 [Variation Procedure] shall apply.

11.3 Extension of Defects Notification Period

The Employer shall be entitled subject to Sub-Clause 2.5 [Employer's Claims] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or by reason of damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.

If delivery and/or erection of Plant and/or Materials was suspended under Sub-Clause 8.8 [Suspension of Work] or Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work], the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/or Materials would otherwise have expired.

11.4 Failure to Remedy Defects

If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by (or on behalf of) the Employer, on or by which the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.

If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Employer may (at his option):

(a) Carry out the work himself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to Sub-Clause 2.5 [Employer's Claims] pay to the Employer the costs reasonably incurred by the Employer in remedying the defect or damage;

(b) Require the Engineer to agree or determine a reasonable reduction in the Contract Price in accordance with Sub-Clause 3.5 [Determinations]; or

(c) If the defect or damage deprives the Employer of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contract or otherwise, the Employer shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

11.5 Removal of Defective Work

If the defect or damage cannot be remedied expeditiously on the Site and the Employer gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security.

11.6 Further Tests

If the work of remedying of any defect or damage may affect the performance of the Works, the Engineer may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 28 days after the defect or damage is remedied.

These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 [Cost of Remedying Defects], for the cost of the remedial work.

11.7 Right of Access

Until the Performance Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Employer's reasonable security restrictions.

11.8 Contractor to Search

The Contractor shall, if required by the Engineer, search for the cause of any defect, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Cost of the search plus profit shall be agreed or determined by the Engineer in accordance with Sub-Clause 3.5 [Determinations] and shall be included in the Contract Price.

11.9 Performance Certificate

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.

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.

Only the Performance Certificate shall be deemed to constitute acceptance of the Works.

11.10 Unfulfilled Obligations

After the Performance Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

11.11 Clearance of Site

Upon receiving the Performance Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

If all these items have not been removed within 28 days after receipt by the Contractor of the Performance Certificate, the Employer may sell or otherwise dispose of any remaining items. The Employer shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Employer's costs, the Contractor shall pay the outstanding balance to the Employer.

12. Measurement and Evaluation

12.1 Works to be Measured

The Works shall be measured, and valued for payment, in accordance with this Clause. The Contractor shall show in each application under Sub-Clauses 14.3 [Application for Interim Payment Certificates], 14.10 [Statement on Completion] and 14.11 [Application for Final Payment Certificate] the quantities and other particulars detailing the amounts which he considers to be entitled under the Contract.

Whenever the Engineer requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:

(a) Promptly either attend or send another qualified representative to assist the Engineer in making the measurement; and

(b) Supply any particulars requested by the Engineer.

If the Contractor fails to attend or send a representative, the measurement made by (or on behalf of) the Engineer shall be accepted as accurate.

Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.

If the Contractor examines and disagrees the records, and/or does not sign them as agreed, then the Contractor shall give notice to the Engineer of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Engineer shall review the records and either confirm or vary them and certify the payment of the undisputed part. If the Contractor does not so give notice to the Engineer within 14 days after being requested to examine the records, they shall be accepted as accurate.

12.2 Method of Measurement

Except as otherwise stated in the Contract and notwithstanding local practice:

(a) Measurement shall be made of the net actual quantity of each item of the Permanent Works; and

(b) The method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

12.3 Evaluation

Except as otherwise stated in the Contract, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the Contract Price by evaluating each item of work, applying the measurement agreed or determined in accordance with the above Sub-Clauses 12.1 and 12.2 and the appropriate rate or price for the item.

For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the Contract or, if there is no such item, specified for similar work.

Any item of work included in the Bill of Quantities for which no rate or price was specified shall be considered as included in other rates and prices in the Bill of Quantities and will not be paid for separately.

However, a new rate or price shall be appropriate for an item of work if:

(a)

(i) The measured quantity of the item is changed by more than 25% from the quantity of this item in the Bill of Quantities or other Schedule;

(ii) This change in quantity multiplied by such specified rate for this item exceeds 0.25% of the Accepted Contract Amount;

(iii) This change in quantity directly changes the Cost per unit quantity of this item by more than 1%; and

(iv) This item is not specified in the Contract as a "fixed rate item";

or

(b)

(i) The work is instructed under Clause 13 [Variations and Adjustments];

(ii) No rate or price is specified in the Contract for this item; and

(iii) No specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.

Each new rate or price shall be derived from any relevant rates or prices in the Contract, with reasonable adjustments to take account of the matters described in sub-paragraph (a) and/or (b), as applicable. If no rates or prices are relevant for the derivation of a new rate or price, it shall be derived from the reasonable Cost of executing the work, together with profit, taking account of any other relevant matters.

Until such time as an appropriate rate or price is agreed or determined, the Engineer shall determine a provisional rate or price for the purposes of Interim Payment Certificates as soon as the concerned work commences.

12.4 Omissions

Whenever the omission of any work forms part (or all) of a Variation, the value of which has not been agreed, if:

(a) The Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount;

(b) The omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and

(c) This cost is not deemed to be included in the evaluation of any substituted work;

then the Contractor shall give notice to the Engineer accordingly, with supporting particulars. Upon receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this cost, which shall be included in the Contract Price.

13. Variations and Adjustments

13.1 Right to Vary

Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal.

The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Engineer stating (with supporting particulars) that (i) the Contractor cannot readily obtain the Goods required for the Variation, or (ii) such Variation triggers a substantial change in the sequence or progress of the Works. Upon receiving this notice, the Engineer shall cancel, confirm or vary the instruction.

Each Variation may include:

(a) Changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation);

(b) Changes to the quality and other characteristics of any item of work;

(c) Changes to the levels, positions and/or dimensions of any part of the Works;

(d) Omission of any work unless it is to be carried out by others;

(e) Any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work; or

(f) Changes to the sequence or timing of the execution of the Works.

The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Engineer instructs or approves a Variation.

13.2 Value Engineering

The Contractor may, at any time, submit to the Engineer a written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Employer of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Employer of the completed Works, or (iv) otherwise be of benefit to the Employer.

The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.3 [Variation Procedure].

If a proposal, which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:

(a) The Contractor shall design this part;

(b) Sub-paragraphs (a) to (d) of Sub-Clause 4.1 [Contractor's General Obligations] shall apply; and

(c) If this change results in a reduction in the contract value of this part, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to

agree or determine a fee, which shall be included in the Contract Price. This fee shall be half (50%) of the difference between the following amounts:

(i) Such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost]; and

(ii) The reduction (if any) in the value to the Employer of the varied works, taking account of any reductions in quality, anticipated life or operational efficiencies.

However, if amount (i) is less than amount (ii), there shall not be a fee.

13.3 Variation Procedure

If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:

(a) A description of the proposed work to be performed and a programme for its execution;

(b) The Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 [Programme] and to the Time for Completion; and

(c) The Contractor's proposal for evaluation of the Variation.

The Engineer shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 [Value Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.

Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.

Each Variation shall be evaluated in accordance with Clause 12 [Measurement and Evaluation], unless the Engineer instructs or approves otherwise in accordance with this Clause.

13.4 Payment in Applicable Currencies

If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

13.5 Provisional Sums

Each Provisional Sum shall only be used, in whole or in part, in accordance with the Engineer's instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Engineer shall have instructed. For each Provisional Sum, the Engineer may instruct:

(a) Work to be executed (including Plant, Materials or services to be supplied) by the Contractor and valued under Sub-Clause 13.3 [Variation Procedure]; and/or

(b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]) or otherwise; and for which there shall be included in the Contract Price:

(i) The actual amounts paid (or due to be paid) by the Contractor; and

(ii) A sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If there is no such rate, the percentage rate stated in the Contract Data shall be applied.

The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.

13.6 Daywork

For work of a minor or incidental nature, the Engineer may instruct that a Variation shall be executed on a daywork basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.

Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.

Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Engineer accurate statements in duplicate which shall include the following details of the resources used in executing the previous day's work:

(a) The names, occupations and time of Contractor's Personnel;

(b) The identification, type and time of Contractor's Equipment and Temporary Works; and

(c) The quantities and types of Plant and Materials used.

One copy of each statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [Application for Interim Payment Certificates].

13.7 Adjustments for Changes in Legislation

The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost, which shall be included in the Contract Price.

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

Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of

a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the table of adjustment data in accordance with the provisions of Sub-Clause 13.8 [Adjustments for Changes in Cost].

13.8 Adjustments for Changes in Cost

In this Sub-Clause, "table of adjustment data" means the completed table of adjustment data for local and foreign currencies included in the Schedules. If there is no such table of adjustment data, this Sub-Clause shall not apply.

If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labour, Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in Costs is not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.

The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be of the following general type:

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 for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.

In cases where the "currency of index" is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the central bank of the Country, of this relevant currency on the above date for which the index is required to be applicable.

Until such time as each current cost index is available, the Engineer shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.

If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices thereafter shall be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time for Completion of the Works, or (ii) the current index or price, whichever is more favourable to the Employer.

The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.

14. Contract Price and Payment

14.1 The Contract Price

Unless otherwise stated in the Particular Conditions:

(a) The Contract Price shall be agreed or determined under Sub-Clause 12.3 [Evaluation] and be subject to adjustments in accordance with the Contract;

(b) The Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [Adjustments for Changes in Legislation];

(c) Any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:

(i) Of the Works which the Contractor is required to execute, or

(ii) For the purposes of Clause 12 [Measurement and Evaluation]; and

(d) The Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules. The Engineer may take account of the breakdown when preparing Payment Certificates, but shall not be bound by it.

Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts therefor, imported by the Contractor for the sole purpose of executing the Contract shall be exempt from the payment of import duties and taxes upon importation.

14.2 Advance Payment

The Employer shall make an advance payment, as an interest-free loan for mobilisation and cash flow support, when the Contractor submits a guarantee in accordance with this Sub-Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the Contract Data.

Unless and until the Employer receives this guarantee, or if the total advance payment is not stated in the Contract Data, this Sub-Clause shall not apply.

The Engineer shall deliver to the Employer and to the Contractor an Interim Payment Certificate for the advance payment or its first instalment after receiving a Statement (under Sub-Clause 14.3 [Application for Interim Payment Certificates]) and after the Employer receives (i) the Performance Security in accordance with Sub-Clause 4.2

[Performance Security] and (ii) a guarantee in amounts and currencies equal to the advance payment. This guarantee shall be issued by a reputable bank or financial institution selected by the Contractor and shall be in the form annexed to the Particular Conditions or in another form approved by the Employer.

The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount shall be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

Unless stated otherwise in the Contract Data, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Engineer in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates], as follows:

(a) Deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds 30 percent (30%)of the Accepted Contract Amount less Provisional Sums; and

(b) Deductions shall be made at the amortisation rate stated in the Contract Data of the amount of each Interim Payment Certificate (excluding the advance payment and deductions for its repayments as well as deductions for retention money) in the currencies and proportions of the advance payment until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the time when 90 percent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment.

If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [Termination by Employer], Clause 16 [Suspension and Termination by Contractor] or Clause 19 [Force Majeure] (as the case may be), the whole of the balance then outstanding shall immediately become due and in case of termination under Clause 15 [Termination by Employer], except for Sub-Clause 15.5 [Employer's Entitlement to Termination for Convenience], payable by the Contractor to the Employer.

14.3 Application for Interim Payment Certificates

The Contractor shall submit a Statement in six copies to the Engineer after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers himself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].

The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

(a) The estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);

(b) Any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost];

(c) Any amount to be deducted for retention, calculated by applying the percentage of retention stated in the Contract Data to the total of the above amounts, until

the amount so retained by the Employer reaches the limit of Retention Money (if any) stated in the Contract Data;

(d) Any amounts to be added for the advance payment and (if more than one instalment) and to be deducted for its repayments in accordance with Sub-Clause 14.2 [Advance Payment];

(e) Any amounts to be added and deducted for Plant and Materials in accordance with Sub-Clause 14.5 [Plant and Materials intended for the Works];

(f) Any other additions or deductions which may have become due under the Contract or otherwise, including those under Clause 20 [Claims, Disputes and Arbitration]; and

(g) The deduction of amounts certified in all previous Payment Certificates.

14.4 Schedule of Payments

If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

(a) The instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates];

(b) Sub-Clause 14.5 [Plant and Materials intended for the Works] shall not apply; and

(c) If these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less or more than that on which this schedule of payments was based, then the Engineer may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine revised instalments, which shall take account of the extent to which progress is less or more than that on which the instalments were previously based.

If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

14.5 Plant and Materials intended for the Works

If this Sub-Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3, (i) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates].

If the lists referred to in sub-paragraphs (b)(i) or (c)(i) below are not included in the Schedules, this Sub-Clause shall not apply.

The Engineer shall determine and certify each addition if the following conditions are satisfied:

(a) The Contractor has:

(i) Kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection; and

(ii) Submitted a statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence;

and either:

(b) The relevant Plant and Materials:

(i) Are those listed in the Schedules for payment when shipped;

(ii) Have been shipped to the Country, en route to the Site, in accordance with the Contract; and

(iii) Are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Engineer together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Employer in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [Advance Payment] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration;

or

(c) The relevant Plant and Materials:

(i) Are those listed in the Schedules for payment when delivered to the Site; and

(ii) Have been delivered to and are properly stored on the Site, are protected against loss, damage or deterioration, and appear to be in accordance with the Contract.

The additional amount to be certified shall be the equivalent of eighty percent (80%) of the Engineer's determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials.

The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

14.6 Issue of Interim Payment Certificates

No amount will be certified or paid until the Employer has received and approved the Performance Security. Thereafter, the Engineer shall, within 28 days after receiving a Statement and supporting documents, deliver to the Employer and to the Contractor an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with all supporting particulars for any reduction or particular made by the Engineer on the Statement if any.

However, prior to issuing the Taking-Over Certificate for the Works, the Engineer shall not be bound to issue an Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment

Certificates (if any) stated in the Contract Data. In this event, the Engineer shall give notice to the Contractor accordingly.

An Interim Payment Certificate shall not be withheld for any other reason, although:

(a) If any thing supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or

(b) If the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the Engineer, the value of this work or obligation may be withheld until the work or obligation has been performed.

The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer's acceptance, approval, consent or satisfaction.

14.7 Payment

The Employer shall pay to the Contractor:

(a) The first instalment of the advance payment within 42 days after issuing the Letter of Acceptance or within 21 days after receiving the documents in accordance with Sub-Clause 4.2 [Performance Security] and Sub-Clause 14.2 [Advance Payment], whichever is later;

(b) The amount certified in each Interim Payment Certificate within 56 days after the Engineer receives the Statement and supporting documents; or, at a time when the Bank's loan or credit (from which part of the payments to the Contractor is being made) is suspended, the amount shown on any statement submitted by the Contractor within 14 days after such statement is submitted, any discrepancy being rectified in the next payment to the Contractor; and

(c) The amount certified in the Final Payment Certificate within 56 days after the Employer receives this Payment Certificate; or, at a time when the Bank's loan or credit (from which part of the payments to the Contractor is being made) is suspended, the undisputed amount shown in the Final Statement within 56 days after the date of notification of the suspension in accordance with Sub-Clause 16.2 [Termination by Contractor].

Payment of the amount due in each currency shall be made into the bank account, nominated by the Contractor, in the payment country (for this currency) specified in the Contract.

14.8 Delayed Payment

If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [Payment], the Contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [Payment], irrespective (in the case of its sub-paragraph (b)) of the date on which any Interim Payment Certificate is issued.

Unless otherwise stated in the Particular Conditions, these financing charges shall be calculated at the annual rate of three percentage points above the discount rate of the central bank in the country of the currency of payment, or if not available, the interbank offered rate, and shall be paid in such currency.

The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy.

14.9 Payment of Retention Money

When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate is issued for a Section or part of the Works, a proportion of the Retention Money shall be certified and paid. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section or part, by the estimated final Contract Price.

Promptly after the latest of the expiry dates of the Defects Notification Periods, the outstanding balance of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate was issued for a Section, a proportion of the second half of the Retention Money shall be certified and paid promptly after the expiry date of the Defects Notification Period for the Section. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section by the estimated final Contract Price.

However, if any work remains to be executed under Clause 11 [Defects Liability], the Engineer shall be entitled to withhold certification of the estimated cost of this work until it has been executed.

When calculating these proportions, no account shall be taken of any adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost].

Unless otherwise stated in the Particular Conditions, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment by the Engineer, the Contractor shall be entitled to substitute a guarantee, in the form annexed to the Particular Conditions or in another form approved by the Employer and issued by a reputable bank or financial institution selected by the Contractor, for the second half of the Retention Money. The Contractor shall ensure that the guarantee is in the amounts and currencies of the second half of the Retention Money and is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects, as specified for the Performance Security in Sub-Clause 4.2. On receipt by the Employer of the required guarantee, the Engineer shall certify and the Employer shall pay the second half of the Retention Money. The release of the second half of the Retention Money against a guarantee shall then be in lieu of the release under the second paragraph of this Sub-Clause. The Employer shall return the guarantee to the Contractor within 21 days after receiving a copy of the Performance Certificate.

If the Performance Security required under Sub-Clause 4.2 is in the form of a demand guarantee, and the amount guaranteed under it when the Taking-Over Certificate is issued is more than half of the Retention Money, then the Retention Money guarantee will not be required. If the amount guaranteed under the Performance Security when the Taking-Over Certificate is issued is less than half of the Retention Money, the Retention Money guarantee will only be required for the difference between half of the Retention Money and the amount guaranteed under the Performance Security.

14.10 Statement at Completion

Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer six copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [Application for Interim Payment Certificates], showing:

(a) The value of all work done in accordance with the Contract up to the date stated in the Taking-Over Certificate for the Works;

(b) Any further sums which the Contractor considers to be due; and

(c) An estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.

The Engineer shall then certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates].

14.11 Application for Final Payment Certificate

Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:

(a) The value of all work done in accordance with the Contract; and

(b) Any further sums which the Contractor considers to be due to him under the Contract or otherwise.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require within 28 days from receipt of said draft and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed. This agreed statement is referred to in these Conditions as the "Final Statement".

However if, following discussions between the Engineer and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.4 [Obtaining Dispute Board's Decision] or Sub-Clause 20.5 [Amicable Settlement], the Contractor shall then prepare and submit to the Employer (with a copy to the Engineer) a Final Statement.

14.12 Discharge

When submitting the Final Statement, the Contractor shall submit a discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date.

14.13 Issue of Final Payment Certificate

Within 28 days after receiving the Final Statement and discharge in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall deliver, to the Employer and to the Contractor, the Final Payment Certificate which shall state:

(a) The amount which he fairly determines is finally due; and

(b) After giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled, the balance (if any) due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 28 days, the Engineer shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

14.14 Cessation of Employer's Liability

The Employer shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

(a) In the Final Statement; and also

(b) (Except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 14.10 [Statement at Completion].

However, this Sub-Clause shall not limit the Employer's liability under his indemnification obligations, or the Employer's liability in any case of fraud, deliberate default or reckless misconduct by the Employer.

14.15 Currencies of Payment

The Contract Price shall be paid in the currency or currencies named in the Schedule of Payment Currencies. If more than one currency is so named, payments shall be made as follows:

(a) If the Accepted Contract Amount was expressed in Local Currency only:

(i) The proportions or amounts of the Local and Foreign Currencies, and the fixed rates of exchange to be used for calculating the payments, shall be as stated in the Schedule of Payment Currencies, except as otherwise agreed by both Parties;

(ii) Payments and deductions under Sub-Clause 13.5 [Provisional Sums] and Sub-Clause 13.7 [Adjustments for Changes in Legislation] shall be made in the applicable currencies and proportions; and

(iii) Other payments and deductions under sub-paragraphs (a) to (d) of Sub-Clause 14.3 [Application for Interim Payment Certificates] shall be made in the currencies and proportions specified in sub-paragraph (a)(i) above;

(b) Payment of the damages specified in the Contract Data, shall be made in the currencies and proportions specified in the Schedule of Payment Currencies;

(c) Other payments to the Employer by the Contractor shall be made in the currency in which the sum was expended by the Employer, or in such currency as may be agreed by both Parties;

(d) If any amount payable by the Contractor to the Employer in a particular currency exceeds the sum payable by the Employer to the Contractor in that currency, the Employer may recover the balance of this amount from the sums otherwise payable to the Contractor in other currencies; and

(e) If no rates of exchange are stated in the Schedule of Payment Currencies, they shall be those prevailing on the Base Date and determined by the central bank of the Country.

15. Termination by Employer

15.1 Notice to Correct

If the Contractor fails to carry out any obligation under the Contract, the Engineer may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.

15.2 Termination by Employer

The Employer shall be entitled to terminate the Contract if the Contractor:

(a) Fails to comply with Sub-Clause 4.2 [Performance Security] or with a notice under Sub-Clause 15.1 [Notice to Correct];

(b) Abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract;

(c) Without reasonable excuse fails:

(i) To proceed with the Works in accordance with Clause 8 [Commencement, Delays and Suspension]; or

(ii) To comply with a notice issued under Sub-Clause 7.5 [Rejection] or Sub-Clause 7.6 [Remedial Work], within 28 days after receiving it;

(d) Subcontracts the whole of the Works or assigns the Contract without the required agreement;

(e) Becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events; or

(f) Gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:

(i) For doing or forbearing to do any action in relation to the Contract; or

(ii) For showing or forbearing to show favour or disfavour to any person in relation to the Contract,

or if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination.

In any of these events or circumstances, the Employer may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub-paragraph (e) or (f), the Employer may by notice terminate the Contract immediately.

The Employer's election to terminate the Contract shall not prejudice any other rights of the Employer, under the Contract or otherwise.

The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for him, to the Engineer. However, the Contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.

After termination, the Employer may complete the Works and/or arrange for any other entities to do so. The Employer and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.

The Employer shall then give notice that the Contractor's Equipment and Temporary Works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Employer, these items

may be sold by the Employer in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

15.3 Valuation at Date of Termination

As soon as practicable after a notice of termination under Sub-Clause 15.2 [Termination by Employer] has taken effect, the Engineer shall proceed in accordance with Sub-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 Payment after Termination

After a notice of termination under Sub-Clause 15.2 [Termination by Employer] has taken effect, the Employer may:

(a) Proceed in accordance with Sub-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 Sub-Clause 15.3 [Valuation at Date of Termination]. After recovering any such losses, damages and extra costs, the Employer shall pay any balance to the Contractor.

15.5 Employer's Entitlement to Termination for Convenience

The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security. The Employer shall not terminate the Contract under this Sub-Clause in order to execute the Works himself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor under Clause 16.2 [Termination by Contractor].

After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment] and shall be paid in accordance with Sub-Clause 16.4 [Payment on Termination].

15.6 Corrupt or Fraudulent Practices

If the Employer determines, based on reasonable evidence, that the Contractor has engaged in corrupt, fraudulent, collusive or coercive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days notice to the Contractor, terminate the Contract and expel him from the Site, and the provisions of Clause 15 shall apply as if such termination had been made under Sub-Clause 15.2 [Termination by Employer].

Should any employee of the Contractor be determined, based on reasonable evidence, to have engaged in corrupt, fraudulent or coercive practice during the execution of the work then that employee shall be removed in accordance with Sub-Clause 6.9 [Contractor's Personnel].

For the purposes of this Sub-Clause:

(i) "Corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) "Fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(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

(i) Deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(ii) Acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Sub-Clause 1.15 [Inspections and Audits by the Bank].

16. Suspension and Termination by Contractor

16.1 Contractor's Entitlement to Suspend Work

If the Engineer fails to certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates] or the Employer fails to comply with Sub-Clause 2.4 [Employer's Financial Arrangements] or Sub-Clause 14.7 [Payment], the Contractor may, after giving not less than 21 days' notice to the Employer, suspend work (or reduce the rate of work) unless and until the Contractor has received the Payment Certificate, reasonable evidence or payment, as the case may be and as described in the notice.

Notwithstanding the above, if the Bank has suspended disbursements under the loan or credit from which payments to the Contractor are being made, in whole or in part, for the execution of the Works, and no alternative funds are available as provided for in Sub-Clause 2.4 [Employer's Financial Arrangements], the Contractor may by notice suspend work or reduce the rate of work at any time, but not less than 7 days after the Borrower having received the suspension notification from the Bank.

The Contractor's action shall not prejudice his entitlements to financing charges under Sub-Clause 14.8 [Delayed Payment] and to termination under Sub-Clause 16.2 [Termination by Contractor].

If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.

If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost plus profit, which shall be included in the Contract Price.

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

16.2 Termination by Contractor

The Contractor shall be entitled to terminate the Contract if:

(a) The Contractor does not receive the reasonable evidence within 42 days after giving notice under Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work] in respect of a failure to comply with Sub-Clause 2.4 [Employer's Financial Arrangements];

(b) The Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate;

(c) The Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in Sub-Clause 14.7 [Payment] within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5 [Employer's Claims]);

(d) The Employer substantially fails to perform his obligations under the Contract in such manner as to materially and adversely affect the economic balance of the Contract and/or the ability of the Contractor to perform the Contract;

(e) The Employer fails to comply with Sub-Clause 1.6 [Contract Agreement] or Sub-Clause 1.7 [Assignment];

(f) A prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [Prolonged Suspension]; or

(g) The Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events;

(h) The Contractor does not receive the Engineer's instruction recording the agreement of both Parties on the fulfilment of the conditions for the Commencement of Works under Sub-Clause 8.1 [Commencement of Works].

In any of these events or circumstances, the Contractor may, upon giving 14 days' notice to the Employer, terminate the Contract. However, in the case of sub-paragraph (f) or (g), the Contractor may by notice terminate the Contract immediately.

In the event the Bank suspends the loan or credit from which part or whole of the payments to the Contractor are being made, if the Contractor has not received the sums due to him upon expiration of the 14 days referred to in Sub-Clause 14.7 [Payment] for payments under Interim Payment Certificates, the Contractor may, without prejudice to the Contractor's entitlement to financing charges under Sub-Clause 14.8 [Delayed Payment], take one of the following actions, namely (i) suspend work or reduce the rate of work under Sub-Clause 16.1 above, or (ii) terminate the Contract by giving notice to the Employer, with a copy to the Engineer, such termination to take effect 14 days after the giving of the notice.

The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor, under the Contract or otherwise.

16.3 Cessation of Work and Removal of

After a notice of termination under Sub-Clause 15.5 [Employer's Entitlement to Termination for Convenience], Sub-Clause 16.2 [Termination by Contractor] or Sub-

Contractor's Equipment 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 After a notice of termination under Sub-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 Sub-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 and Responsibility

17.1 Indemnities The Contractor shall indemnify and hold harmless the Employer, the Employer's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

(a) Bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents; and

(b) Damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless and to the extent that any such damage or loss is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

The Employer shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in sub-paragraphs (d)(i), (ii) and (iii) of Sub-Clause 18.3 [Insurance Against Injury to Persons and Damage to Property].

17.2 Contractor's Care of the Works The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [Taking Over of the Works and Sections]) for the Works, when responsibility for the care of the Works shall pass to the Employer. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part

of the Works, responsibility for the care of the Section or part shall then pass to the Employer.

After responsibility has accordingly passed to the Employer, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.

If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 17.3 [Employer's Risks], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.

The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

17.3 Employer's Risks

The risks referred to in Sub-Clause 17.4 [Consequences of Employer's Risks] below, insofar as they directly affect the execution of the Works in the Country, are:

(a) War, hostilities (whether war be declared or not), invasion, act of foreign enemies;

(b) Rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war, within the Country;

(c) Riot, commotion or disorder within the Country by persons other than the Contractor's Personnel;

(d) Munitions of war, explosive materials, ionising radiation or contamination by radio-activity, within the Country, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity;

(e) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;

(f) Use or occupation by the Employer of any part of the Permanent Works, except as may be specified in the Contract;

(g) Design of any part of the Works by the Employer's Personnel or by others for whom the Employer is responsible; and

(h) Any operation of the forces of nature which is Unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate preventive precautions.

17.4 Consequences of Employer's Risks

If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Engineer and shall rectify this loss or damage to the extent required by the Engineer.

If the Contractor suffers delay and/or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) Payment of any such Cost, which shall be included in the Contract Price. In the case of sub-paragraphs (f) and (g) of Sub-Clause 17.3 [Employer's Risks], Cost plus profit shall be payable.

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

17.5 Intellectual and Industrial Property Rights

In this Sub-Clause, "infringement" means an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and "claim" means a claim (or proceedings pursuing a claim) alleging an infringement.

Whenever a Party does not give notice to the other Party of any claim within 28 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.

The Employer shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:

(a) An unavoidable result of the Contractor's compliance with the Contract; or

(b) A result of any Works being used by the Employer:

(i) For a purpose other than that indicated by, or reasonably to be inferred from, the Contract; or

(ii) In conjunction with any thing not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.

The Contractor shall indemnify and hold the Employer harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.

If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.

17.6 Limitation of Liability

Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with the Contract, other than as specifically provided in Sub-Clause 8.7 [Delay Damages]; Sub-Clause 11.2 [Cost of Remedying Defects]; Sub-Clause 15.4 [Payment after Termination]; Sub-Clause 16.4 [Payment on Termination]; Sub-Clause 17.1 [Indemnities]; Sub-Clause 17.4(b) [Consequences of Employer's Risks] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights].

The total liability of the Contractor to the Employer, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Employer's Equipment and Free-Issue Materials], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall

not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in the Contract Data, or (if such multiplier or other sum is not so stated) the Accepted Contract Amount.

This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

17.7 Use of Employer's Accomodation/Facilities

The Contractor shall take full responsibility for the care of the Employer provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).

If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Employer is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.

18. Insurance

18.1 General Requirements for Insurances

In this Clause, "insuring Party" means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.

Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms approved by the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

Wherever the Employer is the insuring Party, each insurance shall be effected with insurers and in terms acceptable to the Contractor. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Employer shall act for Employer's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.

The relevant insuring Party shall, within the respective periods stated in the Contract Data (calculated from the Commencement Date), submit to the other Party:

(a) Evidence that the insurances described in this Clause have been effected; and

(b) Copies of the policies for the insurances described in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment] and Sub-Clause 18.3 [Insurance against Injury to Persons and Damage to Property].

When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.

Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes to the execution of the Works and ensure that insurance is maintained in accordance with this Clause.

Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or attempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.

If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contract, or fails to provide satisfactory evidence and copies of policies in accordance with this Sub-Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay the amount of these premiums to the other Party, and the Contract Price shall be adjusted accordingly.

Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Employer, under the other terms of the Contract or otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Employer in accordance with these obligations, liabilities or responsibilities. However, if the insuring Party fails to effect and keep in force an insurance which is available and which it is required to effect and maintain under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.

Payments by one Party to the other Party shall be subject to Sub-Clause 2.5 [Employer's Claims] or Sub-Clause 20.1 [Contractor's Claims], as applicable.

The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to Clause 18) with insurers from any eligible source country.

18.2 Insurance for Works and Contractor's Equipment

The insuring Party shall insure the Works, Plant, Materials and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the date by which the evidence is to be submitted under sub-paragraph (a) of Sub-Clause 18.1 [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.

The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability]).

The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

Unless otherwise stated in the Particular Conditions, insurances under this Sub-Clause:

(a) Shall be effected and maintained by the Contractor as insuring Party;

(b) Shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated to the Party actually bearing the costs of rectifying the loss or damage,

(c) Shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [Employer's Risks];

(d) Shall also cover, to the extent specifically required in the bidding documents of the Contract, loss or damage to a part of the Works which is attributable to the use or occupation by the Employer of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 17.3 [Employer's Risks], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated in the Contract Data (if an amount is not so stated, this sub-paragraph (d) shall not apply); and

(e) May however exclude loss of, damage to, and reinstatement of:

(i) A part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below);

(ii) A part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship;

(iii) A part of the Works which has been taken over by the Employer, except to the extent that the Contractor is liable for the loss or damage; and

(iv) Goods while they are not in the Country, subject to Sub-Clause 14.5 [Plant and Materials intended for the Works].

If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Employer, with supporting particulars. The Employer shall then (i) be entitled subject to Sub-Clause 2.5 [Employer's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [General Requirements for Insurances].

18.3 Insurance against Injury to Persons and Damage to Property

The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under Sub-Clause 18.4 [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

This insurance shall be for a limit per occurrence of not less than the amount stated in the Contract Data, with no limit on the number of occurrences. If an amount is not stated in the Contract Data, this Sub-Clause shall not apply.

Unless otherwise stated in the Particular Conditions, the insurances specified in this Sub-Clause:

(a) Shall be effected and maintained by the Contractor as insuring Party;

(b) Shall be in the joint names of the Parties;

(c) Shall be extended to cover liability for all loss and damage to the Employer's property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract; and

(d) May however exclude liability to the extent that it arises from:

(i) The Employer's right to have the Permanent Works executed on, over, under, in or through any land, and to occupy this land for the Permanent Works;

(ii) Damage which is an unavoidable result of the Contractor's obligations to execute the Works and remedy any defects; and

(iii) A cause listed in Sub-Clause 17.3 [Employer's Risks], except to the extent that cover is available at commercially reasonable terms.

18.4 Insurance for Contractor's Personnel

The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.

The insurance shall cover the Employer and the Engineer against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

19. Force Majeure

19.1 Definition of Force Majeure

In this Clause, "Force Majeure" means an exceptional event or circumstance:

(a) Which is beyond a Party's control;

(b) Which such Party could not reasonably have provided against before entering into the Contract

(c) Which, having arisen, such Party could not reasonably have avoided or overcome; and

(d) Which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

(i) War, hostilities (whether war be declared or not), invasion, act of foreign enemies;

(ii) Rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war;

(iii) Riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel;

(iv) Munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity; and

(v) Natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

19.2 Notice of Force Majeure

If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.

The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

19.3 Duty to Minimise Delay

Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure.

A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

19.4 Consequences of Force Majeure

If the Contractor is prevented from performing his substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

(a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion]; and

(b) If the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [Definition of Force Majeure] and, in sub-paragraphs (ii) to (iv), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment].

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

19.5 Force Majeure Affecting Subcontractor

If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.

19.6 Optional Termination, Payment and Release

If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment].

Upon such termination, the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include:

(a) The amounts payable for any work carried out for which a price is stated in the Contract;

(b) The Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;

(c) Other Cost or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;

(d) The Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and

(e) The Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.

19.7 Release from Performance

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

(a) The Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract; and

(b) The sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [Optional Termination, Payment and Release] if the Contract had been terminated under Sub-Clause 19.6.

20. Claims, Disputes and Arbitration

20.1 Contractor's Claims

If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall

be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.

If the Contractor fails to give notice of a claim within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.

The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Employer's liability, the Engineer may, after receiving any notice under this Sub-Clause, monitor the record-keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Engineer to inspect all these records, and shall (if instructed) submit copies to the Engineer.

Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Engineer a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

(a) This fully detailed claim shall be considered as interim;

(b) The Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Engineer may reasonably require; and

(c) The Contractor shall send a final claim within 28 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.

Within 42 days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period.

Within the above defined period of 42 days, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

If the Engineer does not respond within the timeframe defined in this Clause, either Party may consider that the claim is rejected by the Engineer and any of the Parties

may refer to the Dispute Board in accordance with Sub-Clause 20.4 [Obtaining Dispute Board's Decision].

The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause.

20.2 Appointment of the Dispute Board

Disputes shall be referred to a DB for decision in accordance with Sub-Clause 20.4 [Obtaining Dispute Board's Decision]. The Parties shall appoint a DB by the date stated in the Contract Data.

The DB shall comprise, as stated in the Contract Data, either one or three suitably qualified persons ("the members"), each of whom shall be fluent in the language for communication defined in the Contract and shall be a professional experienced in the type of construction involved in the Works and with the interpretation of contractual documents. If the number is not so stated and the Parties do not agree otherwise, the DB shall comprise three persons.

If the Parties have not jointly appointed the DB 21 days before the date stated in the Contract Data and the DB is to comprise three persons, each Party shall nominate one member for the approval of the other Party. The first two members shall recommend and the Parties shall agree upon the third member, who shall act as chairman.

However, if a list of potential members has been agreed by the Parties and is included in the Contract, the members shall be selected from those on the list, other than anyone who is unable or unwilling to accept appointment to the DB.

The agreement between the Parties and either the sole member or each of the three members shall incorporate by reference the General Conditions of Dispute Board Agreement contained in the Appendix to these General Conditions, with such amendments as are agreed between them.

The terms of the remuneration of either the sole member or each of the three members, including the remuneration of any expert whom the DB consults, shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

If at any time the Parties so agree, they may jointly refer a matter to the DB for it to give its opinion. Neither Party shall consult the DB on any matter without the agreement of the other Party.

If a member declines to act or is unable to act as a result of death, disability, resignation or termination of appointment, a replacement shall be appointed in the same manner as the replaced person was required to have been nominated or agreed upon, as described in this Sub-Clause.

The appointment of any member may be terminated by mutual agreement of both Parties, but not by the Employer or the Contractor acting alone. Unless otherwise agreed by both Parties, the appointment of the DB (including each member) shall expire when the discharge referred to in Sub-Clause 14.12 [Discharge] shall have become effective.

20.3 Failure to Agree on the Composition

If any of the following conditions apply, namely:

of the Dispute Board

(a) The Parties fail to agree upon the appointment of the sole member of the DB by the date stated in the first paragraph of Sub-Clause 20.2 [Appointment of the Dispute Board];

(b) Either Party fails to nominate a member (for approval by the other Party), or fails to approve a member nominated by the other Party, of a DB of three persons by such date;

(c) The Parties fail to agree upon the appointment of the third member (to act as chairman) of the DB by such date; or

(d) The Parties fail to agree upon the appointment of a replacement person within 42 days after the date on which the sole member or one of the three members declines to act or is unable to act as a result of death, disability, resignation or termination of appointment;

then the appointing entity or official named in the Contract Data shall, upon the request of either or both of the Parties and after due consultation with both Parties, appoint this member of the DB. This appointment shall be final and conclusive. Each Party shall be responsible for paying one-half of the remuneration of the appointing entity or official.

20.4 Obtaining Dispute Board's Decision

If a dispute (of any kind whatsoever) arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works, including any dispute as to any certificate, determination, instruction, opinion or valuation of the Engineer, either Party may refer the dispute in writing to the DB for its decision, with copies to the other Party and the Engineer. Such reference shall state that it is given under this Sub-Clause.

For a DB of three persons, the DB shall be deemed to have received such reference on the date when it is received by the chairman of the DB.

Both Parties shall promptly make available to the DB all such additional information, further access to the Site, and appropriate facilities, as the DB may require for the purposes of making a decision on such dispute. The DB shall be deemed to be not acting as arbitrator(s).

Within 84 days after receiving such reference, or within such other period as may be proposed by the DB and approved by both Parties, the DB shall give its decision, which shall be reasoned and shall state that it is given under this Sub-Clause. The decision shall be binding on both Parties, who shall promptly give effect to it unless and until it shall be revised in an amicable settlement or an arbitral award as described below. Unless the Contract has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the Works in accordance with the Contract.

If either Party is dissatisfied with the DB's decision, then either Party may, within 28 days after receiving the decision, give a Notice of Dissatisfaction to the other Party indicating its dissatisfaction and intention to commence arbitration. If the DB fails to give its decision within the period of 84 days (or as otherwise approved) after receiving such reference, then either Party may, within 28 days after this period has expired, give a Notice of Dissatisfaction to the other Party.

In either event, this Notice of Dissatisfaction shall state that it is given under this Sub-Clause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Except as stated in Sub-Clause 20.7 [Failure to Comply with Dispute Board's Decision] and Sub-Clause 20.8 [Expiry of Dispute Board's Appointment], neither Party shall be entitled to commence arbitration of a dispute unless a Notice of Dissatisfaction has been given in accordance with this Sub-Clause.

If the DB has given its decision as to a matter in dispute to both Parties, and no Notice of Dissatisfaction has been given by either Party within 28 days after it received the DB's decision, then the decision shall become final and binding upon both Parties.

20.5 Amicable Settlement

Where a Notice of Dissatisfaction has been given under Sub-Clause 20.4 above, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, the Party giving a Notice of Dissatisfaction in accordance with Sub-Clause 20.4 above should move to commence arbitration after the fifty-sixth day from the day on which a Notice of Dissatisfaction was given, even if no attempt at an amicable settlement has been made.

20.6 Arbitration

Any dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 20.5 above and in respect of which the DB's decision (if any) has not become final and binding shall be finally settled by arbitration. Arbitration shall be conducted as follows:

(a) If the contract is with foreign contractors,

International arbitration (1) with proceedings administered by the arbitration institution designated in the Contract Data, and conducted under the rules of arbitration of such institution; or, if so specified in the Contract Data, (2) international arbitration in accordance with the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL); or (3) if neither an arbitration institution nor UNCITRAL arbitration rules are specified in the Contract Data, with proceedings administered by the International Chamber of Commerce (ICC) and conducted under the ICC Rules of Arbitration; by one or more arbitrators appointed in accordance with said arbitration rules;

(b) If the Contract is with domestic contractors, arbitration with proceedings conducted in accordance with the laws of the Employer's country.

The place of arbitration shall be the neutral location specified in the Contract Data; and the arbitration shall be conducted in the language for communications defined in Sub-Clause 1.4 [Law and Language].

The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, and any decision of the DB, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Engineer from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.

Neither Party shall be limited in the proceedings before the arbitrators to the evidence or arguments previously put before the DB to obtain its decision, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction. Any decision of the DB shall be admissible in evidence in the arbitration.

Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, the Engineer and the DB shall not be altered by reason of any arbitration being conducted during the progress of the Works.

20.7 Failure to Comply with Dispute Board's Decision

In the event that a Party fails to comply with a final and binding DB decision, then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under Sub-Clause 20.6 [Arbitration]. Sub-Clause 20.4 [Obtaining Dispute Board's Decision] and Sub-Clause 20.5 [Amicable Settlement] shall not apply to this reference.

20.8 Expiry of Dispute Board's Appointment

If a dispute arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works and there is no DB in place, whether by reason of the expiry of the DB's appointment or otherwise:

(a) Sub-Clause 20.4 [Obtaining Dispute Board's Decision] and Sub-Clause 20.5 [Amicable Settlement] shall not apply; and

(b) The dispute may be referred directly to arbitration under Sub-Clause 20.6 [Arbitration].

APPENDIX

A General Conditions of Dispute Board Agreement

1. Definitions

Each "Dispute Board Agreement" is a tripartite agreement by and between:

(a) The "Employer";

(b) The "Contractor"; and

(c) The "Member" who is defined in the Dispute Board Agreement as being:

(i) The sole member of the "DB" and, where this is the case, all references to the "Other Members" do not apply, or

(ii) One of the three persons who are jointly called the "DB" (or "Dispute Board") and, where this is the case, the other two persons are called the "Other Members".

The Employer and the Contractor have entered (or intend to enter) into a contract, which is called the "Contract" and is defined in the Dispute Board Agreement, which incorporates this Appendix. In the Dispute Board Agreement, words and expressions which are not otherwise defined shall have the meanings assigned to them in the Contract.

2. General Provisions

Unless otherwise stated in the Dispute Board Agreement, it shall take effect on the latest of the following dates:

(a) The Commencement Date defined in the Contract;

(b) When the Employer, the Contractor and the Member have each signed the Dispute Board Agreement; or

(c) When the Employer, the Contractor and each of the Other Members (if any) have respectively each signed a dispute board agreement.

This employment of the Member is a personal appointment. At any time, the Member may give not less than 70 days' notice of resignation to the Employer and to the Contractor, and the Dispute Board Agreement shall terminate upon the expiry of this period.

3. Warranties

The Member warrants and agrees that he/she is and shall be impartial and independent of the Employer, the Contractor and the Engineer. The Member shall promptly disclose, to each of them and to the Other Members (if any), any fact or circumstance which might appear inconsistent with his/her warranty and agreement of impartiality and independence.

When appointing the Member, the Employer and the Contractor relied upon the Member's representations that he/she is:

(a) Experienced in the work which the Contractor is to carry out under the Contract;

(b) Experienced in the interpretation of contract documentation; and

(c) Fluent in the language for communications defined in the Contract.

4. General Obligations of the Member

The Member shall:

(a) Have no interest financial or otherwise in the Employer, the Contractor or Engineer, nor any financial interest in the Contract except for payment under the Dispute Board Agreement;

(b) Not previously have been employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except in such circumstances as were disclosed in writing to the Employer and the Contractor before they signed the Dispute Board Agreement;

(c) Have disclosed in writing to the Employer, the Contractor and the Other Members (if any), before entering into the Dispute Board Agreement and to his/her best knowledge and recollection, any professional or personal relationships with any director, officer or employee of the Employer, the Contractor or the Engineer, and any previous involvement in the overall project of which the Contract forms part;

(d) Not, for the duration of the Dispute Board Agreement, be employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except as may be agreed in writing by the Employer, the Contractor and the Other Members (if any);

(e) Comply with the annexed procedural rules and with Sub-Clause 20.4 of the Conditions of Contract;

(f) Not give advice to the Employer, the Contractor, the Employer's Personnel or the Contractor's Personnel concerning the conduct of the Contract, other than in accordance with the annexed procedural rules;

(g) Not while a Member enter into discussions or make any agreement with the Employer, the Contractor or the Engineer regarding employment by any of them, whether as a consultant or otherwise, after ceasing to act under the Dispute Board Agreement;

(h) Ensure his/her availability for all site visits and hearings as are necessary;

(i) Become conversant with the Contract and with the progress of the Works (and of any other parts of the project of which the Contract forms part) by studying all documents received which shall be maintained in a current working file;

(j) Treat the details of the Contract and all the DB's activities and hearings as private and confidential, and not publish or disclose them without the prior written consent of the Employer, the Contractor and the Other Members (if any); and

(k) Be available to give advice and opinions, on any matter relevant to the Contract when requested by both the Employer and the Contractor, subject to the agreement of the Other Members (if any).

5. General Obligations of the Employer and the Contractor

The Employer, the Contractor, the Employer's Personnel and the Contractor's Personnel shall not request advice from or consultation with the Member regarding the Contract, otherwise than in the normal course of the DB's activities under the Contract and the Dispute Board Agreement. The Employer and the Contractor shall be responsible for compliance with this provision, by the Employer's Personnel and the Contractor's Personnel respectively.

The Employer and the Contractor undertake to each other and to the Member that the Member shall not, except as otherwise agreed in writing by the Employer, the Contractor, the Member and the Other Members (if any):

(a) Be appointed as an arbitrator in any arbitration under the Contract;

(b) Be called as a witness to give evidence concerning any dispute before arbitrator(s) appointed for any arbitration under the Contract; or

(c) Be liable for any claims for anything done or omitted in the discharge or purported discharge of the Member's functions, unless the act or omission is shown to have been in bad faith.

The Employer and the Contractor hereby jointly and severally indemnify and hold the Member harmless against and from claims from which he is relieved from liability under the preceding paragraph.

Whenever the Employer or the Contractor refers a dispute to the DB under Sub-Clause 20.4 of the Conditions of Contract, which will require the Member to make a site visit and attend a hearing, the Employer or the Contractor shall provide appropriate security for a sum equivalent to the reasonable expenses to be incurred by the Member. No account shall be taken of any other payments due or paid to the Member.

6. Payment

The Member shall be paid as follows, in the currency named in the Dispute Board Agreement:

(a) A retainer fee per calendar month, which shall be considered as payment in full for:

(i) Being available on 28 days' notice for all site visits and hearings;

(ii) Becoming and remaining conversant with all project developments and maintaining relevant files;

(iii) All office and overhead expenses including secretarial services, photocopying and office supplies incurred in connection with his duties; and

(iv) All services performed hereunder except those referred to in sub-paragraphs (b) and (c) of this Clause.

The retainer fee shall be paid with effect from the last day of the calendar month in which the Dispute Board Agreement becomes effective; until the last day of the calendar month in which the Taking-Over Certificate is issued for the whole of the Works.

With effect from the first day of the calendar month following the month in which the Taking-Over Certificate is issued for the whole of the Works, the retainer fee shall be reduced by one third .This reduced fee shall be paid until the first day of the calendar month in which the Member resigns or the Dispute Board Agreement is otherwise terminated.

(b) A daily fee which shall be considered as payment in full for:

(i) Each day or part of a day up to a maximum of two days' travel time in each direction for the journey between the Member's home and the Site, or another location of a meeting with the Other Members (if any);

(ii) Each working day on Site visits, hearings or preparing decisions; and

(iii) Each day spent reading submissions in preparation for a hearing;

(c) All reasonable expenses including necessary travel expenses (air fare in less than first class, hotel and subsistence and other direct travel expenses) incurred in connection with the Member's duties, as well as the cost of telephone calls, courier charges, faxes and telexes: a receipt shall be required for each item in excess of five percent of the daily fee referred to in sub-paragraph (b) of this Clause;

(d) Any taxes properly levied in the Country on payments made to the Member (unless a national or permanent resident of the Country) under this Clause 6.

The retainer and daily fees shall be as specified in the Dispute Board Agreement. Unless it specifies otherwise, these fees shall remain fixed for the first 24 calendar months, and shall thereafter be adjusted by agreement between the Employer, the Contractor and the Member, at each anniversary of the date on which the Dispute Board Agreement became effective.

If the parties fail to agree on the retainer fee or the daily fee, the appointing entity or official named in the Contract Data shall determine the amount of the fees to be used.

The Member shall submit invoices for payment of the monthly retainer and air fares quarterly in advance. Invoices for other expenses and for daily fees shall be submitted following the conclusion of a Site visit or hearing. All invoices shall be accompanied by a brief description of activities performed during the relevant period and shall be addressed to the Contractor.

The Contractor shall pay each of the Member's invoices in full within 56 calendar days after receiving each invoice and shall apply to the Employer (in the Statements under the Contract) for reimbursement of one-half of the amounts of these invoices. The Employer shall then pay the Contractor in accordance with the Contract.

If the Contractor fails to pay to the Member the amount to which he/she is entitled under the Dispute Board Agreement, the Employer shall pay the amount due to the Member and any other amount which may be required to maintain the operation of the DB; and without prejudice to the Employer's rights or remedies. In addition to all other rights arising from this default, the Employer shall be entitled to reimbursement of all sums paid in excess of one-half of these payments, plus all costs of recovering these sums and financing charges calculated at the rate specified in Sub-Clause 14.8 of the Conditions of Contract.

If the Member does not receive payment of the amount due within 70 days after submitting a valid invoice, the Member may (i) suspend his/her services (without notice) until the payment is received, and/or (ii) resign his/her appointment by giving notice under Clause 7.

7. Termination

At any time: (i) the Employer and the Contractor may jointly terminate the Dispute Board Agreement by giving 42 days' notice to the Member; or (ii) the Member may resign as provided for in Clause 2.

If the Member fails to comply with the Dispute Board Agreement, the Employer and the Contractor may, without prejudice to their other rights, terminate it by notice to the Member. The notice shall take effect when received by the Member.

If the Employer or the Contractor fails to comply with the Dispute Board Agreement, the Member may, without prejudice to his other rights, terminate it

by notice to the Employer and the Contractor. The notice shall take effect when received by them both.

Any such notice, resignation and termination shall be final and binding on the Employer, the Contractor and the Member. However, a notice by the Employer or the Contractor, but not by both, shall be of no effect.

8. Default of the Member

If the Member fails to comply with any of his obligations under Clause 4 (a) - (d) above, he shall not be entitled to any fees or expenses hereunder and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses received by the Member and the Other Members (if any), for proceedings or decisions (if any) of the DB which are rendered void or ineffective by the said failure to comply.

If the Member fails to comply with any of his obligations under Clause 4 (e) - (k) above, he shall not be entitled to any fees or expenses hereunder from the date and to the extent of the non-compliance and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses already received by the Member, for proceedings or decisions (if any) of the DB which are rendered void or ineffective by the said failure to comply.

9. Disputes

Any dispute or claim arising out of or in connection with this Dispute Board Agreement, or the breach, termination or invalidity thereof, shall be finally settled by institutional arbitration. If no other arbitration institute is agreed, the arbitration shall be conducted under the Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with these Rules of Arbitration.

PROCEDURAL RULES

Unless otherwise agreed by the Employer and the Contractor, the DB shall visit the Site at intervals of not more than 140 days, including times of critical construction events, at the request of either the Employer or the Contractor. Unless otherwise agreed by the Employer, the Contractor and the DB, the period between consecutive visits shall not be less than 70 days, except as required to convene a hearing as described below.

The timing of and agenda for each Site visit shall be as agreed jointly by the DB, the Employer and the Contractor, or in the absence of agreement, shall be decided by the DB. The purpose of Site visits is to enable the DB to become and remain acquainted with the progress of the Works and of any actual or potential problems or claims, and, as far as reasonable, to endeavour to prevent potential problems or claims from becoming disputes.

Site visits shall be attended by the Employer, the Contractor and the Engineer and shall be co-ordinated by the Employer in co-operation with the Contractor. The Employer shall ensure the provision of appropriate conference facilities and secretarial and copying services. At the conclusion of each Site visit and before leaving the site, the DB shall prepare a report on its activities during the visit and shall send copies to the Employer and the Contractor.

The Employer and the Contractor shall furnish to the DB one copy of all documents which the DB may request, including Contract documents, progress reports, variation instructions, certificates and other documents pertinent to the performance of the Contract. All communications between the DB and the Employer or the Contractor shall be copied to the other Party. If the DB comprises three persons, the Employer and the Contractor shall send copies of these requested documents and these communications to each of these persons.

If any dispute is referred to the DB in accordance with Sub-Clause 20.4 of the Conditions of Contract, the DB shall proceed in accordance with Sub-Clause 20.4 and these Rules. Subject to the time allowed to give notice of a decision and other relevant factors, the DB shall:

(a) Act fairly and impartially as between the Employer and the Contractor, giving each of them a reasonable opportunity of putting his case and responding to the other's case; and

(b) Adopt procedures suitable to the dispute, avoiding unnecessary delay or expense.

The DB may conduct a hearing on the dispute, in which event it will decide on the date and place for the hearing and may request that written documentation and arguments from the Employer and the Contractor be presented to it prior to or at the hearing.

Except as otherwise agreed in writing by the Employer and the Contractor, the DB shall have power to adopt an inquisitorial procedure, to refuse admission to hearings or audience at hearings to any persons other than representatives of the Employer, the Contractor and the Engineer, and to proceed in the absence of any party who the DB is satisfied received notice of the hearing; but shall have discretion to decide whether and to what extent this power may be exercised.

The Employer and the Contractor empower the DB, among other things, to:

(a) Establish the procedure to be applied in deciding a dispute;

(b) Decide upon the DB's own jurisdiction, and as to the scope of any dispute referred to it;

(c) Conduct any hearing as it thinks fit, not being bound by any rules or procedures other than those contained in the Contract and these Rules;

(d) Take the initiative in ascertaining the facts and matters required for a decision;

(e) Make use of its own specialist knowledge, if any;

(f) Decide upon the payment of financing charges in accordance with the Contract;

(g) Decide upon any provisional relief such as interim or conservatory measures; and

(h) Open up, review and revise any certificate, decision, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute.

The DB shall not express any opinions during any hearing concerning the merits of any arguments advanced by the Parties. Thereafter, the DB shall make and give its decision in accordance with Sub-Clause 20.4, or as otherwise agreed by the Employer and the Contractor in writing. If the DB comprises three persons:

(a) It shall convene in private after a hearing, in order to have discussions and prepare its decision;

(b) It shall endeavour to reach a unanimous decision: if this proves impossible the applicable decision shall be made by a majority of the Members, who may require the minority Member to prepare a written report for submission to the Employer and the Contractor; and

(c) If a Member fails to attend a meeting or hearing, or to fulfil any required function, the other two Members may nevertheless proceed to make a decision; unless:

(i) Either the Employer or the Contractor does not agree that they do so; or

(ii) The absent Member is the chairman and he/she instructs the other Members not to make a decision.

Section IX. Particular Conditions (PC)

Part A - Contract Data

Conditions	Sub-Clause	Data
Employer's name and address	1.1.2.2 & 1.3	**The Kenya Power and Lighting Company Limited, Stima Plaza, 2nd Floor, Kolobot Road, Parklands, P.O Box 30099 – 00100, Nairobi, Kenya.**
Engineer's name	1.1.2.4 & 1.3	**The Engineer will be the Consultant that shall be engaged to assist the employer in the Supervision and Management of the Project.**
Bank's name	1.1.2.11	European Investment Bank (EIB)
Borrower's name	1.1.2.12	The "Borrower" is "The Government of the Republic of Kenya".
Time for Completion of the Works	1.1.3.3	78 weeks (18 months).
Defects Notification Period	1.1.3.7	365 days from taken over date under Sub-Clause 10.2 [Taking Over of Parts of the Works]
Sections	1.1.5.6	*N/A*
Specifications ESHS	1.1.6.11	Specifications ESHS are applicable. Employer's ESMF is also provided under Section VII for compliance.
Exceptionally Adverse Climatic Conditions	1.1.6.15	*N/A*
Governing Law	1.4	Kenyan law
Ruling language	1.4	English
Language for communications	1.4	English

Conditions	Sub-Clause	Data
Time for Access to the Site	2.1	The contractor will have access to site within one (1) month after the effective date. The Employer shall give the Contractor right of access to the Site upon submission of evidence that the insurances specified in PCC 18 have been effected.
Engineer's Duties and Authority	3.1	The Engineer shall obtain specific approval of the Employer before taking the following actions: (a) Issuing any instruction resulting in substantial changes to the Works, or an increase of the Accepted Contract Amount and/or an extension of the Time for Completion; (b) Proceeding to Determination under Sub-Clause 3.5; (c) Issuing Interim Payment Certificate under Sub-Clause 14.6; (d) Issuance of a Taking over Certificate under Sub-Clauses 10.1 and 10.2; (e) etc
Contractor's General Obligations	4.1	The Contractor shall provide the following documents as part of the Contract and as specified in the Specification: (a) Shop drawings to be approved by the Engineer prior to starting the Works; (b) As-built drawings to be approved by the Engineer prior to taking over of the Works; and (c) Operation and maintenance manuals. (d) Equipment Warranties (e) Collection of customer documents from site (f) Contracting of customer accounts in InCMS (g) EPRA wiring certificates for cases where the contractor will install ready boards in the customers' premises.
Performance Security	4.2	The performance security will be in the form of a bank guarantee in the amount(s) of ***10*** per cent of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount.
Progress reports	4.21	Frequency of progress reports: *Monthly*
Subcontractors	4.4	Direct payment of Sub-Contractors is **Not** allowed**.**
Normal working hours	6.5	*8;00AM to 5:00PM from Monday To Friday and 8:00AM to 1:00PM on Saturdays*
Commencement of Works	8.1	The Commencement Date shall be: The date of signature of the Contract Agreement subject to the Contractor furnishing a Performance Security and confirmation of its authenticity by the employer
Delay damages for the Works	8.7 & 14.15(b)	**0.001** % of the Contract Price per day.

Conditions	Sub-Clause	Data
Maximum amount of delay damages	8.7	**10%** of the final Contract Price.
Right to Vary	13.1	The parties have a right to vary the contract scope .The cumulative variations shall not exceed twenty (20) per cent of the original contract price. In the event the cumulative value of all contract variations result in an increment of the total contract price exceeding twenty (20) per cent of the original contract price, the variation will be subject to the financier's special approval (''No Objection'').
Percentage for adjustment of Provisional Sums	13.5. (b)(ii)	N/A
Adjustments for Changes in Cost	13.8	N/A
Contract Price	14.1(b)	The Contract Price is a full Lump Sum Price (In a lump sum contract, the contractor is deemed to have included all inputs that are necessary to perform the scope of works. Neither arithmetic corrections nor price adjustments shall be made. However, errors arising from additions of subtotals shall be corrected).
	14.1(b) 14.1(d)	The following taxes, duties and fees exemptions apply to the Contract: Custom duties, Value Added Tax, Import Declaration Fee and Railway Development Levy. Withholding tax shall be applicable. If requested by the Engineer, the breakdown of all unit prices shall also be submitted by the Contractor within 28 days from the Commencement Date.
Total advance payment	14.2	**10%** (Percentage) of the Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable
Repayment amortization rate of advance payment	14.2(b)	The repayment amortization rate (%) shall be twice the percentage specified as Advance Payment in PC 14.2.
Percentage of Retention	14.3	10%
Limit of Retention Money	14.3	10% of the Accepted Contract Amount
Plant and Materials	14.5(b)(i)	If Sub-Clause 14.5 applies: Plant and Materials for payment when shipped en route to the Site (Free on Board): [***Plant and materials from abroad, As per price schedule]***
	14.5(c)(i)	Plant and Materials for payment when delivered to the Site: ***[*locally procured plant and materials, As per price schedule].**

Conditions	Sub-Clause	Data
Minimum Amount of Interim Payment Certificates	14.6	Eur.100, 000 or its equivalent in Kenya Shillings. NB: Except with formal approval of the Contract Project Manager, invoicing shall be strictly done for finished "work sections (or sub-sites)" as follows: **For an old/existing transformer being maximized:** Complete maximization and closure of the work at the "sub-site" including metering of all customers being served by that particular transformer.
Payment	14.7	The Employer shall pay to the Contractor the amount certified in each Interim Payment Certificate within **60** days. Payment to the Contractor of the amounts due in each currency shall be made into the following bank accounts: *[insert bank account details at the time of contract signing]*
Publishing source of commercial interest rates for financial charges in case of delayed payment	14.8	The interest rate for payments in local currency shall be the *prevailing Central Bank of Kenya* ***Treasury Bill Rate***. The interest rate for payments in foreign currency is **EURIBOR (3 Months Average).**
Intellectual and Industrial Property Rights	17.5	The Bank requires that tenderers and sub-contractors participating in this tendering procedure or a contract under a Bank-financed project shall not violate or have violated any intellectual property rights.
Periods for submission of insurance: a. evidence of insurance. b. relevant policies	18.1	 14 days 28 days
Minimum amount of third party insurance per occurrence	18.3	*[Insert amount of third party insurance]*
Date by which the DB shall be appointed	20.2	28 days after the Commencement date or such other date that the parties may agree.
The DB shall be comprised of	20.2	A DB of Three Members
List of potential DB sole members	20.2	*None*
Appointment (if not agreed) to be made by	20.3	*President of FIDIC*
Arbitration rules **Place of arbitration**	20.6 20.6	*International Chamber of Commerce* *To be agreed between the Contractor and Employer outside the country of origin of the Employer and Contractor*

Table: Summary of Sections

Section Name/Description (Sub-Clause 1.1.5.6)	Time for Completion (Sub-Clause 1.1.3.3)	Damages for Delay (Sub-Clause 8.7)
N/A		

Part B - Specific Provisions

Conditions	Sub-Clause	Specific Provisions
Schedules	1.1.1.7	***Full Lump Sum Contract.***
Defects Notification Period	1.1.3.7	As per Sub-Clause 10.2 of the GCC [Taking Over of Parts of the Works]"
Site	1.1.6.7	"Site" means the places where the Permanent Works are to be executed and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.
Variation	1.1.6.9	"Variation" means any change to Specification or the Drawings or the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments].
ESHS Specifications	1.1.6.11	Specifications ESHS are applicable. Employer's ESMF is also provided under Section VII for compliance.
Project Area	1.1.6.12	*As per definition in the scope of works*
Worksite - ESMP	1.1.6.13	Contractor to submit within 10 weeks of signing the contract
EPP	1.1.6.14	*N/A*
Communications	1.3	*Add the following at the end of item (a), after "Contract Data" and before ";":* ". In case of electronic transmission, these communications shall be in the form of an un-editable record attached to an electronic mail, such as a PDF document for instance, and any other communication transmitted in a different manner, such as the email body text, shall not be construed as communication under the Contract". *Before the last paragraph, add the following sentence:* "Delivery of communications, by any authorized method of transmission, shall be made against receipt"
Priority of Documents	1.5	*Add the following at the end of the Sub-Clause:* "The Contractor shall be obliged to comply with the clarification or instruction of the Engineer without any adjustment to the Contract Price and/or to the Time for Completion."
Contract Agreement	1.6	*This Sub-Clause is deleted in its entirety and replaced by:*"The Parties shall enter into a Contract Agreement within 28 days but not earlier than 14 days after the Contractor receives the Letter of Acceptance, or within 28 days after the Employer receives the Performance Security, whichever is later. The Contract Agreement shall be based upon the form annexed to the Particular Conditions. The Contract Agreement shall include any annexed memoranda comprising agreements between and signed by both Parties. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Contractor.

Conditions	Sub-Clause	Specific Provisions
		This Contract constitutes the entire agreement between the Parties in connection with its subject matter and supersedes all prior representations, communications, negotiations and undertakings concerning the subject matter of this Contract. The Parties acknowledge and agree that by entering into this Contract they do not rely on any statement, representation, assurance or warranty of any person (whether a party to the Contract or not or whether made in writing or not) other than as expressly set out in the Contract."
Care and Supply of Documents	1.8	*Delete the 2nd sentence of the 2nd paragraph in its entirety, and replace it by:* "The Contractor shall supply to the Engineer each of the Contractor's Documents in one (1) soft (digital) copy and two (2) hard (hard) copies".
Inspections and Audit by the EIB	1.15	*This Sub-Clause is deleted in its entirety and replaced by:* "The Contractor shall permit, and shall cause its agents (whether declared or not), sub-contractors, sub-consultants, service providers, or suppliers and any personnel thereof, to permit, the EIB and/or persons appointed by the EIB to inspect the Site and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the EIB if requested by the EIB. The Contractor's attention is drawn to Sub-Clause 15.6 [Corrupt or Fraudulent Practices] which provides, inter alia, that acts intended to materially impede the exercise of the EIB's inspection and audit rights provided for under Sub-Clause 1.15 constitute a prohibited practice subject to contract termination."
Non Waiver	1.16	*Additional Sub-Clause* Except as otherwise specifically provided for in the Contract, no failure or delay by either Party in exercising any right or remedy provided by the Laws or pursuant to the Contract will impair such right or remedy or operate or be construed as a waiver or variation of it or preclude its exercise at any subsequent time and no single or partial exercise of any such right or remedy will preclude any other or further exercise of it or the exercise of any other right or remedy.
Survival of Obligations	1.17	*Additional Sub-Clause* Obligations under the Contract, which by their nature would continue beyond the termination or expiration hereof, including, by way of illustration only and not limitation, those in Clause 1 [General Provisions], Clause 11 [Defects Liability], Clause 17 [Indemnities], Clause 18 [Insurance], and Clause 20 [Claims and Disputes] shall survive the termination or expiration of the Contract.

Conditions	Sub-Clause	Specific Provisions
Severability	1.18	*Additional Sub-Clause* The Parties expressly declare that each section, clause or paragraph of this Contract will be considered separate in terms of its validity and enforceability. Therefore, if, for any reason, any provision of this Contract is declared null and void, or if a ruling states that any part of it runs contrary to governing law, said declaration will in no way affect the validity and enforceability of the other stipulations, which may be construed, understood and executed independently of the portion declared null and void. Thus, every part of this Contract not declared null and void in any way will be valid, enforceable and binding on the Parties. Likewise, if any provision of this Contract or its application to any individual or company or in a given circumstance is declared null and void, or if its enforceability is in any way limited, the other provisions herein, as well as also the application of the doubtful provision to other people or in other circumstances, will not be affected thereby, and they will be applied to the extent permitted by governing law. Notwithstanding the above, the Parties undertake to negotiate in good faith the terms of a mutually satisfactory provision to replace any clause that may be declared null and void or whose enforceability is in any way restricted.
No Partnership or Agency	1.19	*Additional Sub-Clause* Nothing contained in this Contract shall be construed to either constitute a partnership nor constitute either Party an agent or employee of the other Party.
Amendment	1.20	*Additional Sub-Clause* This Contract may not be altered, varied, changed, supplemented or amended except by a written instrument duly signed and executed by the Parties and expressly stated to be an amendment to this Contract. For the sake of clarity, any Variation under Clause 13 [Variations and Adjustments] which is leading to a substantial change to the Works, an increase of the Contract Price and/or to an extension of the Time for Completion shall be reflected in an amendment to this Contract.

Conditions	Sub-Clause	Specific Provisions
Right of Access to the Site	2.1	*Insert the following in the 1st paragraph, after the 1st sentence and before the 2nd sentence:* "This Employer is however under no obligation to give the Contractor right of access to, and possession of, any other area located outside the boundaries of the Site, even if such other area is located within the Project Area. Access to, and possession of, such any other area is fully at the Contractor's risk." *Add at the end of the 1st paragraph, after "received", the following:* "and until such time, whichever is the later, the Contractor has provided written evidence in the form of a broker's or an insurer's certificate that all insurances to be taken-out by the Contractor pursuant to the Contract have been duly put in place and are in full force and effect."
Employer's Claims	2.5	*Delete the 2nd sentence of the 2nd paragraph in its entirety.*
Delegation by the Engineer	3.2	Delegation by the Engineer is subject to the provisions of the contract between the Employer and the Engineer.
Instructions of the Engineer	3.3	*Remove the entire text from* "If the Engineer or a delegated assistant" *to* "(as the case may be)", *and replace it by the following:* "Verbal instructions given on Site shall only be binding on the Contractor if recorded by the Engineer, or his delegated assistant (as the case may be) in the on-site log book defined under Sub-Clause 4.25." *Add the following at the end of the Sub-Clause:* "If such an instruction would in the opinion of the Contractor, acting reasonably: (i) Result in possible adverse consequences for, including but not limited to, the quality of the Works and/or the Time for Completion; and/or (ii) Otherwise result in any increase in the Contract Price then: the Contractor shall immediately notify the Employer and the Engineer of the same in writing, and in any event before the Contractor implements the instruction. Following the issue of such notice, the Contractor shall implement the instruction given by the Engineer unless instructed otherwise by the Engineer. Under any circumstances, failure by the Contractor to notify the Engineer in accordance with Sub-Clause 20.1 [Contractor's Claims] shall mean that any performance of the Works relating thereto shall be deemed to be solely at the Contractor's risk and cost. The Contractor shall not have the right thereafter to rely on such circumstances when a claim is made against him by the Employer for any failure by the Contractor to perform the Works in accordance with the requirements of the Contract or by him to

Conditions	Sub-Clause	Specific Provisions
		the Employer for any relief (which includes, without limitation, any claim for any extension to the Time for Completion and/or for any additional payment) in accordance with the Contract."
Replacement of the Engineer	3.4	Not applicable
Contractor's General Obligations	4.1	*Insert the following at the end of the 2nd paragraph:* "Goods and services from countries under embargo from the European Union and/or the United Nations are not eligible and shall not be used by the Contractor." *Insert the following at the end of the Sub-Clause:* "If an unsolicited technical alternative, proposed by the Contractor, and approved by the Employer, becomes incorporated under the Contract and includes a change in the design of part or all of the Works, then unless otherwise agreed by both Parties: (i) the Bidder who becomes the Contractor shall design this part, (ii) sub-paragraphs (a) to (d) of the Conditions of Contract Sub-Clause 4.1 shall apply, and (iii) Contract price for this part of the Works shall be a lump sum price."
Contractor's representative	4.3	*Delete the 3rd paragraph in its entirety and replace it by the following:* "The Contractor shall not, without the prior consent of the Employer, revoke the appointment of the Contractor's Representative or appoint a replacement."
Subcontractors	4.4	In item (b), replace "Engineer" by "Employer." *If the option for direct payment of Sub-Contractors has been selected in Sub-Clause 4.4 of the PC, then:* A Sub-Contractor named in the Contract or designated after Contract signing with the Engineer's consent may be paid directly by the Employer for work done, and/or supplies or services provided by the said Sub-Contractor for which the Contractor has not been already paid, if (a) the Employer and the relevant authorities whose approval of the Contract is required so agree, or (b) the Employer's country laws and regulations so require. In such case, the Contractor shall furnish a statement to the Engineer, prior to any commencement of the subcontracted work including the following: a) The nature and scope of work or activities intended to be subcontracted; b) The name, registration information and address of the proposed Sub-Contractor; and

Conditions	Sub-Clause	Specific Provisions
		c) The payment terms and conditions intended in the subcontract agreement, and the intended amount of the subcontract, including the date of establishment of the price, and if applicable, the modalities for price variation, advance payment, progress payment mechanism, price reductions, bonuses and penalties. Within one (1) month of their receipt the Engineer shall either accept all supporting documents relating to direct payment or reject them in full or in part with justification to the Contractor, failing which the Engineer shall be deemed to have accepted all supporting documents which the Engineer did not explicitly rejected.
Safety Procedures	4.8	*Add the following at the end of the Sub-Clause:* "These provisions are complemented by those listed under the ESHS Specifications which the Contractor must ensure full compliance with."
Inspection	7.3	*In the first sentence of the last paragraph, add* ", in accordance with the Specification*" after "*notice to the Engineer*" and before "*whenever*"* *In the last sentence of the last paragraph*: (a) *Add* "within the prescribed period" after "notice"; (b) *Add* "risk and" before "cost".
Testing	7.4	*Add the following at the end of the 2nd paragraph:* "The Contractor shall carry out such further tests as may be required under the applicable Laws and as may be required by the relevant legally constituted public authorities in the Country in order for them to approve the completed Works. Any tests required by the applicable Laws or legally constituted authorities are deemed never to be varied or additional tests and are to be carried out by the Contractor at his risk and expense. " *In the 4th paragraph, replace* "not less than 24 hours' notice" *by* "24 hours' notice, unless a longer period is indicated in the Specification."
Commencement of Works	8.1	*Insert the following after* "Sub-Clause 16.2 [Termination by Contractor]" *and before* ".": "unless the Contractor has caused, or contributed in any respect to, any non-fulfilment of one or all of these precedent conditions". *Add the following at the end of the Sub-Clause:* "As defined in the ESHS Specifications (if any), no physical work may commence on any Project Area until such time the Contractor has prepared and submitted to the Engineer the Worksite - ESMP, and the annexed EPP corresponding to a Project Area, and the Engineer has approved those."

Conditions	Sub-Clause	Specific Provisions
Extension of Time for Completion	8.4	*Replace the first paragraph by the following:* "The Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that any of the following causes affect his ability to meet the Time for Completion": *Add the following at the end of the Sub-Clause:* "However the Contractor's entitlement to an extension of time shall be reduced if and to the extent that the Contractor's failure to use all reasonable endeavours to mitigate any such delay has contributed to the delay.
		Any extension of Time for Completion granted to the Contractor shall, except where the Contractor is entitled to an increase in the Contract Price in accordance with other provisions of the Contract, be deemed to be full compensation and satisfaction for any loss or damage sustained or to be sustained by the Contractor in respect of the matter or thing in connection with which such extension shall have been granted."
Suspension of Work	8.8	*Add the following after the last sentence of the Sub-Clause:* "As an example, and without limitation to other possible causes, any suspension of work caused by any failure from the Contractor to comply with the obligations stated : (a) Under the ESHS Specifications (if any), in the event of a level 3 non-compliance; (b) Under Sub-Clause 4.8 as to safety procedures; (c) Under Sub-Clause 4.9 as to the quality assurance; (d) Under Sub-Clause 4.18 as to the protection of the environment; or (e) Under Sub-Clause 6.7 as to health and safety; shall be considered as cause of suspension which is the responsibility of the Contractor".
Delayed Tests	9.2	*In the 2nd paragraph, add the following in between* "21 days" *and* "after" : ", or any other period instructed by the Engineer in accordance with and taking due regard of the Contract," *In the 3rd paragraph, add the following in between* "21 days" *and* "," : ", or any other period instructed by the Engineer under the former paragraph,"
Failure to Pass Tests on Completion	9.4	*Add the following item d) after item c):* "d) instruct the Contractor to carry out any remedial work, as provided for in Sub-Clause 7.6 [Remedial Work]"

Conditions	Sub-Clause	Specific Provisions
Taking Over of Parts of the Works	10.2	*Add the following at the end of the 3rd paragraph:* "For the sake of clarity, the Defect Notification Period of a part of the Works which has been taken over under this Sub-Clause will expire when the Defect Notification Period of the Works as a whole, or of the Section to which the part is related, as the case may be, will expire. It will then typically be longer than the latter."
Right to Vary	13.1	*Add the following sentence at the end of the first paragraph:* "Variations shall be strictly limited to what is directly related to and necessary for the Permanent Works, and to what falls under the skills, experience and trades of the Contractor." The parties have a right to vary the contract scope .The cumulative variations shall not exceed twenty (20) per cent of the original contract price. In the event the cumulative value of all contract variations result in an increment of the total contract price exceeding twenty (20) of the original contract price, the variation will be subject to the financiers approval (''No Objection'').
Variation Procedure	13.3	*If the option **Full Lump Sum** has been selected in Sub-Clause 14.1 of these Particular Conditions, replace the last paragraph in its entirety with the following:* "Upon instruction of approving a Variation, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine adjustments to the Contract Price and to the schedule of payments under Sub-Clause 14.4. These adjustments shall include reasonable profit, and shall take account of the Contractor's submissions under Sub-Clause 13.2 [Value Engineering] if applicable."
Adjustments for Changes in Legislation	13.7	*Add the following paragraph at the end of the Sub-Clause* "If the Contractor benefits or will benefit from reduced Cost as a result of such changes, the Engineer shall, subject to Sub-Clause 2.5 [Employer's Claims], proceed in accordance with Sub-Clause 3.5 [Determinations], to agree or determine the amount to be deducted from the Contract Price."
Contract Price	14.1(a)	

Conditions	Sub-Clause	Specific Provisions
		*If the option of full **Lump Sum** has been selected above, replace items (a) and (b) of the Sub-Clause by the following:* "(a) The Contract Price shall be the lump sum Accepted Contract Amount and be subject to adjustments in accordance with the Contract; (c) Any quantities or price data which may be set out in a Schedule shall be used for the purposes stated in the Schedule and may be inapplicable for other purposes.
	14.1 (d)	If requested by the Engineer, the breakdown of all unit prices shall also be submitted by the Contractor within 28 days from the Commencement Date.
	14.1 (e)	*Add the following new item (e) at the end of the Sub-Clause:* (e) Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall be temporarily exempt from the payment of import duties and taxes upon initial importation, provided the Contractor shall post with the customs authorities at the port of entry an approved export bond or bank guarantee, valid until the Time for Completion plus six months, in an amount equal to the full import duties and taxes which would be payable on the assessed imported value of such Contractor's Equipment and spare parts, and callable in the event the Contractor's Equipment is not exported from the Country on completion of the Contract. A copy of the bond or bank guarantee endorsed by the customs authorities shall be provided by the Contractor to the Employer upon the importation of individual items of Contractor's Equipment and spare parts. Upon export of individual items of Contractor's Equipment or spare parts, or upon the completion of the Contract, the Contractor shall prepare, for approval by the customs authorities, an assessment of the residual value of the Contractor's Equipment and spare part to be exported, based on the depreciation scale and other criteria used by the customs authorities for such purposes under the provisions of the applicable Laws. Import duties and taxes shall be due and payable to the customs authorities by the Contractor on (a) the difference between the initial imported value and the residual value of the Contractor's Equipment and spare parts to exported; and (b) on the initial imported value that Contractor's Equipment and spare parts remaining in the Country after completion of the Contract. Upon payment of such dues within 28 days of being invoiced, the bond or bank guarantee shall be reduced or released accordingly; otherwise the security shall be called in the full amount remaining.
Application for Interim Payment Certificates	14.3	*In the 1st sentence of the 1st paragraph, replace "six" by "*one soft (digital) copy and two hard (paper)*"*

Conditions	Sub-Clause	Specific Provisions
Issue of Interim Payment Certificates	14.6	*Add the following sentence at the end of the 1st paragraph.* "The Engineer may withhold any amount up to one hundred percent (100%) of the certification at its discretion in the event that the monthly progress report to be submitted with the Contractor's Statement is missing any of the information listed in paragraphs (a)-(h) of Sub-Clause 4.21 [Progress reports]. Such withheld amounts shall be released in the Interim Payment Certificate in the month following the Contractor's submission of the missing information."
Payment	14.7	*Add the following sentence at the end of the Sub-Clause* "The payment period defined in item (b) above can be suspended for reasons defined in the Contract, in particular in the event of an unresolved level 3 non-compliance specified in the ESHS Specifications if any. Such suspension shall not entitle the Contractor to any additional payment under Sub-Clause 14.8 [Delayed Payment] or otherwise"
Statement at Completion	14.10	*In the 1st paragraph, replace "*six*" by "*one soft copy and two hard*"*
Application for Final Payment Certificate	14.11	*In the 1st paragraph, replace "*six*" by "*one soft copy and two hard*"* *In the 3rd paragraph, add* "by latest 60 days after the receipt of the draft final statement", *after* "the Engineer shall deliver". *In the 3rd paragraph, add the following sentence before the last sentence:* "Failure by the Engineer to deliver such Interim Payment Certificate within that period shall constitute a dispute."
Valuation at Date of Termination	15.3	*Add the following at the end of the Sub-Clause after "Contract" and before ".":* ", except that the Engineer will be under no obligation to consult with the Contractor before making his determination, but may consult with the Contractor at his sole discretion."
Corrupt or Fraudulent Practices	15.6	*Add the following at the end of the Sub-Clause:* "In addition to the provisions of this Sub-Clause, the Contractor is also bound by the provisions found under Appendix 1 to the Particular Conditions of Contract, named "Corrupt and Fraudulent Practices Policy – Social and Environmental Responsibility"."
Duty to Minimize Delay / renamed as "Duty to Minimize Delay and Cost"	19.3	*In the 1st paragraph add* "and/or Cost, including but not limited to those to the Works," *after* "delay"
Optional Termination, Payment and Release	19.6	*In the 2nd paragraph, replace* "the Engineer shall determine" *by the following:* "the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine"

Conditions	Sub-Clause	Specific Provisions
Contractor's Claims	20.1	*Add the following sentence at the end of the 4th paragraph:* "As long as the event or circumstance giving rise to the claim continues having effect, the Contractor shall use all reasonable endeavours to minimise any incurred delay and/or Cost, including but not limited to those to the Works."
Failure to Comply with Dispute Adjudication Board's Decision	20.7	*Delete Sub-Clause 20.7 in its entirety and replace it by the following:* "In the event that a Party fails to comply with any decision of the DAB, whether binding, or final and binding, then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under Sub-Clause 20.6 [Arbitration] for summary or other expedited relief, as may be appropriate. Sub-Clause 20.4 [Obtaining Dispute Adjudication Board's Decision] and Sub-Clause 20.5 [Amicable Settlement] shall not apply to this reference."

Appendix 1 to Particular Conditions of Contract Corrupt and Fraudulent Practices Policy – Social and Environmental Responsibility

1. Corrupt and Fraudulent Practices

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

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

Suppliers, contractors, subcontractors, consultants or subconsultants will permit the EIB to inspect their accounts and records relating to the procurement process and performance of the EIB-financed contract, and to have them audited by auditors appointed by the EIB.

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

(a) Reject a proposal for a contract award if it is established that during the selection process the Bidder or consultant that is recommended for the award has been convicted of corruption, directly or by means of an agent, or has engaged in fraud or anti-competitive practices in view of being awarded the Contract;

(b) Declare misprocurement when it is established that, at any time, the Contracting Authority, the suppliers, contractors, subcontractors, consultants or subconsultants their representatives have engaged in acts of corruption, fraud or anti-competitive practices during the procurement process or performance of the contract without the Contracting Authority having taken appropriate action in due time satisfactory to the EIB to remedy the situation, including by failing to inform the EIB at the time they knew of such practices.

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

(a) Corruption of a Public Officer means:
   (i) The act of promising, offering or giving to a Public Officer, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such Public Officer to act or refrain from acting in his official capacity; or
   (ii) The act by which a Public Officer solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such Public Officer to act or refrain from acting in his official capacity.

(b) A Public Officer shall be construed as meaning:
   (i) Any person who holds a legislative, executive, administrative or judicial mandate (within the country of the Contracting Authority) regardless of whether that person was nominated or elected, regardless of the permanent or temporary, paid or unpaid nature of the position and regardless of the hierarchical level the person occupies;
   (ii) Any other person who performs a public function, including for a State institution or a State-owned company, or who provides a public service;
   (iii) Any other person defined as a Public Officer by the national laws of the country of the Contracting Authority.

(c) Corruption of a private person means:

(i) The act of promising, offering or giving to any person other than a Public Officer, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations; or

(ii) The act by which any person other than a Public Officer solicits or accepts, directly or indirectly, an undue advantage of any kind for himself or for another person or entity, for such person to perform or refrain from performing any act in breach of its legal, contractual or professional obligations;

(d) Fraud means any dishonest conduct (act or omission), whether or not it constitutes a criminal offence, deliberately intended to deceive others, to intentionally conceal items, to violate or vitiate consent, to circumvent legal or regulatory requirements and/or to violate internal rules in order to obtain illegitimate profit.

(e) Anti-competitive practices mean:

(i) Any concerted or implied practices which have as their object or effect the prevention, restriction or distortion of competition within a marketplace, especially where they (i) limit access to the marketplace or free exercise of competition by other undertakings, (ii) prevent free, competition-driven price determination by artificially causing price increases or decreases, (iii) restrict or control production, markets, investments or technical progress; or (iv) divide up market shares or sources of supply;

(ii) Any abuse by one undertaking or a group of undertakings which hold a dominant position on an internal market or on a substantial part of it;

(iii) Any practice whereby prices are quoted or set unreasonably low, the object of which is to eliminate an undertaking or any of its products from a market or to prevent it from entering the market.

2. Social and Environmental Responsibility

In order to promote sustainable development, the EIB seeks to ensure that internationally recognised environmental and social standards are complied with. Candidates for EIB-financed contracts shall consequently undertake in the Covenant of Integrity to:

(a) Comply with and ensure that all their subcontractors, or subconsultants comply with international environmental and labour standards, consistent with applicable law and regulations in the country of implementation of the contract, including the fundamental conventions of the International Labour Organisation (ILO) and international environmental treaties;

(b) Implement environmental and social risks mitigation measures when specified in the environmental and social management plan (ESMP) provided by the Contracting Authority.

Section X. Contract Forms

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Notification of Award

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 Contract Price *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Bidders, is hereby accepted by our institution.

You are requested to furnish the Performance Security within 28 days but not earlier than fourteen (14) days in accordance with the Conditions of Contract, using for that purpose the Performance Security Form included in Section X, Contract Forms, of the Bidding Documents.

Authorized Signature: _____
Name and Title of Signatory: _____
Name of institution: _____

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the _____ day of _____, _____, between _____of _____ (hereinafter "the Employer"), of the one part, and _____ of _____ (hereinafter "the Contractor"), of the other part:

WHEREAS the Employer desires that the Works known as _____ should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein, in the sum of [*insert Contract Price or Ceiling in words and figures, expressed in the Contract currency(ies)*] (hereafter called "the Contract Price").

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.

(i) The Letter of Acceptance;

(ii) The Letter of Bid and Appendix to Bid (including the signed Covenant of Integrity);

(iii) The addenda Nos _____(if any);

(iv) The Particular Conditions;

(v) The General Conditions;

(vi) The Specifications;

(vii) The Drawings;

(viii) The completed Schedules; and

(ix) The Contractor's Bid and any other documents forming part of the contract.

1. In the event of any ambiguity or conflict between documents listed above, the order of precedence shall be the order in which the contract documents are listed.

4. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

5. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract. The Contract Price shall be the aggregate of:_____, _____ as specified in the price schedule No. 7 (Grand Summary), and _____, _____, or such other sums as may be determined in accordance with the terms and conditions of the contract.

6. The terms and procedures of payments according to which the employer will reimburse the contractor are given in appendices 1(a) and 1(b) attached hereto (Terms and Procedures of Payment).

7. The effective date from which the Time for Completion of the facilities shall be counted is the date when all the following conditions shall have been fulfilled:

(a). This Contract Agreement has been duly executed for and on behalf of the Employer and the Contractor.

(b). The contractor has submitted to the employer the performance security and advance payment guarantee.

(c). The Employer has paid the Contractor the advance payment.

Each party shall use its best efforts to fulfill the above conditions for which it is responsible as soon as practicable.

8. The address of the Employer for notice purposes pursuant to GCC 1.3 is: _____

9. The address of the Contractor for notice purposes pursuant to GCC 1.3 is: _____

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Kenya on the day, month and year specified above.

Signed by, for and on behalf of the Employer;

_____

[signature]

_____

[Title]

in the presence of; _____

Signed by, for and on behalf of the Contractor;

_____

[signature]

_____

[Title]

in the presence of; _____

Performance Security

(Demand Guarantee)

Beneficiary: _____
Date: _____
PERFORMANCE GUARANTEE No.: _____
Guarantor: _____

WHEREAS……(hereinafter called "the Contractor") has undertaken, in pursuance of your Tender Number……..(reference number of the Tender) and its Tender dated ……(insert contractors's date of Tender taken from the Letter of Bid Form) for the execution of ……(description of the works) (hereinafter called "the contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Bidder, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____),[1] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's first demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Bidder is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the …. Day of ……, 2… [2], and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

_____
[signature(s)]

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

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[1] *The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

[2] *Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

Advance Payment Security

Bank Guarantee

Beneficiary: _____
Date: _____
ADVANCE PAYMENT GUARANTEE No.: _____
Guarantor: _____

We have been informed that _____ (hereinafter called "the Bidder") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ (_____) is to be made against an advance payment guarantee.

At the request of the Bidder, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____) [1] upon receipt by us of the Beneficiary's first demand supported by the Beneficiary's *statement*, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Bidder:

(a) Has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or

(b) Has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Bidder has failed to repay.

A *demand* under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Bidder on its account number _____ at _____

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Bidder as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the ___ day of _____, 2___,[2] whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

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

_____ *[signature(s)]*

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1 *The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.*

2 *Insert the expected expiration date of the Time for Completion. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

Retention Money Security
Bank Guarantee

_____ *[Guarantor letterhead or SWIFT identifier code]*
Beneficiary: _____ *[Insert name and Address of* Employer*]*
Date: _____ *[Insert date of issue]*
RETENTION MONEY GUARANTEE No.: *[Insert guarantee reference number]*
Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ *[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Bidder") has entered into Contract No. _____ *[insert reference number of the contract]* dated _____ with the Beneficiary, for the execution of _____ *[insert name of contract and brief description of* Works*]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys up to the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, payment of *[*insert the second half of the Retention Money *or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money*, the difference between half of the Retention Money and the amount guaranteed under the Performance Security*]* is to be made against a Retention Money guarantee.

At the request of the Bidder, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ *[insert amount in figures]* (_____) *[amount in words]*[1] upon receipt by us of the Beneficiary's first demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed *document* accompanying or identifying the demand, stating that the Bidder is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as *referred* to above has been credited to the Bidder on its account number _____ at _____ *[insert name and address of Bidder's bank]*.

This guarantee shall expire no later than the …. day of ……, 2… [2], and any demand for *payment* under it must be received by us at the office indicated above on or before that date.

---

[1] *The Guarantor shall insert an amount representing the amount of the second half of the Retention Money or or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and denominated either in the currency(ies) of the second half of the Retention Money as specified in the Contract, or in a freely convertible currency acceptable to the Beneficiary.*

[2] *Insert the same expiry date as set forth in the performance security, representing the date twenty-eight days after the completion date described in GC Clause 11.9. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

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

Bank Guarantee Form for Advance Payment

_____

_____ **Beneficiary:** _____

Date: _____

ADVANCE PAYMENT GUARANTEE No.: _____

We have been informed that _____ (hereinafter called "the Contractor") has entered into Contract No. _____ dated _____ with you, for the execution of _____ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum of _____ (_____) is to be made against an advance payment guarantee.

At the request of the Contractor, we _____ hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of _____ (_____)upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor used the advance payment for purposes other than toward the execution of the Works.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Contractor on his account number _____ at _____.

The maximum amount of this guarantee is valid shall be progressively reduced in proportion to the value of each part-shipment or part-delivery of plant and equipment to the site, as indicated in copies of the relevant shipping and delivery documents that shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of documentation indicating full repayment by the Contractor of the amount of the advance payment, or on the ___ day of _____, 2___, whichever is earlier.[24] Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.
This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No.458._____ [signature(s) name of bank or financial institution]

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 *Employer*'s written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

APPENDICES

Appendix 1 Terms and Procedures of Payment
Appendix 2 Price Adjustment
Appendix 3 Insurance Requirements
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Appendix 1:Terms and Procedures of Payment

In accordance with the provisions of GC Clause 14 (Contract Price and Payment), the Employer shall pay the Contractor in the following manner and at the following times, on the basis of the Price Breakdown given in the section on Price Schedules. Payments will be made in the currencies quoted by the Bidder unless otherwise agreed between the Parties. Applications for payment in respect of part deliveries may be made by the Contractor as work proceeds.

TERMS OF PAYMENT

Schedule No. 1. Plant and Equipment Supplied from Abroad

In respect of plant and equipment supplied from abroad, the following payments shall be made:

Ten percent (10%) of the total CIP amount as an advance payment against receipt of pro-forma invoice and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the plant and equipment delivered to the site, as evidenced by shipping and delivery documents.

Eighty percent (80%) of the total or pro rata CIP amount upon Incoterm "CIP", upon delivery to the carrier within sixty (60) days after receipt of documents.

Five percent (5%) of the total or pro rata CIP amount upon issue of the Completion Certificate, within sixty (60) days after receipt of invoice.

Five percent (5%) of the total or pro rata CIP amount upon issue of the Operational Acceptance Certificate, within sixty (60) days after receipt of invoice.

Schedule No. 2. Plant and Equipment Supplied from within the Employer's Country

In respect of plant and equipment supplied from within the Employer's country, the following payments shall be made:

Ten percent (10%) of the total EXW amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of the plant and equipment delivered to the site, as evidenced by shipping and delivery documents.

Eighty percent (80%) of the total or pro rata EXW amount upon Incoterm "EXW", upon delivery to the carrier within sixty (60) days after receipt of documents.

Five percent (5%) of the total or pro rata EXW amount upon issue of the Completion Certificate, within sixty (60) days after receipt of invoice.

Five percent (5%) of the total or pro rata EXW amount upon issue of the Operational Acceptance Certificate, within sixty (60) days after receipt of invoice.

Schedule No. 3. Design Services

In respect of design services for both the foreign currency and the local currency portions, the following payments shall be made:

Ten percent (10%) of the total design services amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer.

Ninety percent (90%) of the total or pro rata design services amount upon acceptance of design in accordance with GC Clause 20 by the Project Manager within sixty (60) days after receipt of invoice.

Schedule No. 4. Installation Services

In respect of installation services for both the foreign and local currency portions, the following payments shall be made:

Ten percent (10%) of the total installation services amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of work performed by the Contractor as evidenced by the invoices for installation services.

Eighty percent (80%) of the measured value of work performed (completed sites up to metering) by the Contractor, as identified in the said Program of Performance, during the preceding month, as evidenced by the Employer's authorization of the Contractor's application, will be made monthly within sixty (60) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of installation services performed by the Contractor as evidenced by the Employer's authorization of the Contractor's monthly applications, upon issue of the Completion Certificate, within sixty (60) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of installation services performed by the Contractor as evidenced by the Employer's authorization of the Contractor's monthly applications, upon issue of the Operational Acceptance Certificate, within sixty (60) days after receipt of invoice.

Schedule No. 5. Environmental, Social, Health and Safety(ESHS)

In respect of ESHS services for both the foreign and local currency portions, the following payments shall be made:

Ten percent (10%) of the total ESHS services amount as an advance payment against receipt of invoice, and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. The advance payment security may be reduced in proportion to the value of work performed by the Contractor as evidenced by the invoices for ESHS services.

Eighty percent (80%) of the measured value of ESHS work performed by the Contractor, as identified in the said Program of Performance, during the preceding month, as evidenced by the Employer's authorization of the Contractor's application, will be made monthly within sixty (60) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of ESHS services performed by the Contractor as evidenced by the Employer's authorization of the Contractor's monthly applications, upon issue of the Completion Certificate, within sixty (60) days after receipt of invoice.

Five percent (5%) of the total or pro rata value of ESHS services performed by the Contractor as evidenced by the Employer's authorization of the Contractor's monthly applications, upon issue of the Operational Acceptance Certificate, within sixty (60) days after receipt of invoice

In the event that the Employer fails to make any payment on its respective due date, the
The payment delay period after which the employer shall pay interest to the contractor shall be 60days.

The interest rate for foreign currency payments to be EURIBOR (3 months average) and for local currency payments at the prevailing Central Bank of Kenya (CBK) rate.

PAYMENT PROCEDURES

The procedures to be followed in applying for certification and making payments shall be as follows:

Schedule I - Payments will be by Telegraphic Transfers or Letter of Credit (LC). For the LC option, the charges levied by all the Banks that are party to the LC will be borne by the contractor (beneficiary).

Schedule 2, 3 & 4 - The payments will be made through Telegraphic Transfers against certified monthly invoices or statements, either by the employer or directly by the financier, subject to financing agreement.

The documentary evidence required in connection with the payments are those described for each payment portion in terms of payment above.

Appendix 2. Price Adjustment

Not applicable

Appendix 3. Insurance Requirements

Insurances to be Taken Out by the Contractor

In accordance with the provisions of GC Clause 18, the Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurances set forth below in the sums and with the deductibles and other conditions specified. The identity of the insurers and the form of the policies shall be subject to the approval of the Employer, such approval not to be unreasonably withheld.

KPLC shall be co-insured and the Insurance to be taken out in accordance with the laws of Kenya.

Cargo Insurance

Covering loss or damage occurring, while in transit from the supplier's or manufacturer's works or stores until arrival at the Site, to the Facilities (including spare parts thereof) and to the construction equipment to be provided by the Contractor or its Subcontractors.

Amount	Deductible limits	Parties insured	From	To
110% of CIP Price.	EUR 4,500	Employer and Contractor	Works	Site

Covering loss or damage occurring, while in transit from the Employers stores for the goods supplied to be installed into the Plant until arrival at the Site and to the Facilities (including spare parts thereof).

Amount	Deductible limits	Parties insured	From	To
110% of CIP Price.	EUR 4,500	Employer	Stores	Installation into facilities

Price as given in (b) below.

Installation All Risks Insurance

Covering physical loss or damage to the materials/ equipment at the Site, occurring prior to completion of the Facilities, with an extended maintenance coverage for the Contractor's liability in respect of any loss or damage occurring during the defect liability period while the Contractor is on the Site for the purpose of performing its obligations during the defect liability period.

Amount	Deductible limits	Parties insured	From	To
110% of CIP Price	EUR 4,500	Employer and Contractor	Works	Site

130% of the value of materials issued by the employer. The estimated value of these materials per lot is as per table below.

Section X. Contract Forms

Lot	Estimated Cost of materials to be issued by KPLC	
Number	**MATERIALS**	**COST (EUR)**
1	Single phase pre-paid meters	609,383
	Miniature Circuit Breakers	73,076
2	Single phase pre-paid meters	629,107
	Miniature Circuit Breakers	75,441
3	Single phase pre-paid meters	621,047
	Miniature Circuit Breakers	74,475
4	Single phase pre-paid meters	554,888
	Miniature Circuit Breakers	66,541

Third Party Liability Insurance

Covering bodily injury or death suffered by third parties (including the Employer's personnel) and loss of or damage to property (including the Employer's property and any parts of the Facilities that have been accepted by the Employer) occurring in connection with the supply and installation of the Facilities.

Automobile Liability Insurance
Covering use of all vehicles used by the Contractor or its Subcontractors (whether or not owned by them) in connection with the supply and installation of the Facilities.
Comprehensive insurance in accordance with statutory requirements.

Workers' Compensation
In accordance with the statutory requirements applicable in any country where the Facilities or any part thereof is executed.

Employer's Liability
In accordance with the statutory requirements applicable in any country where the Facilities or any part thereof is executed.

Other Insurances
The Contractor is also required to take out and maintain at its own cost the following insurances:

Not Applicable

The Employer shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GC Sub-Clause 34.1, except for the Third Party Liability, Workers' Compensation and Employer's Liability Insurances, and the Contractor's Subcontractors shall be named as co-insureds under all insurance policies taken out by the Contractor pursuant to GC Sub-Clause 34.1, except for the Cargo, Workers' Compensation and Employer's Liability Insurances. All insurer's rights of subrogation against such co-insureds for losses or claims arising out of the performance of the Contract shall be waived under such policies.

Insurances To Be Taken Out By The Employer

The Employer shall at its expense take out and maintain in effect during the performance of the Contract the following insurances.

Not Applicable, however materials provided by the employer are covered under cargo insurance and installation all risk insurance as per appendix 3 above

Appendix 4. Time Schedule

A detailed time schedule, in a form of a Gantt chart to be provided as per Section III.

Appendix 5. List of Major Items of Plant and Installation Services and List of Approved Subcontractors

A list of major items of Plant and Installation Services is provided below.

The following Subcontractors and/or manufacturers are approved for carrying out the items of the Facilities indicated below. Where more than one Subcontractor is listed, the Contractor is free to choose between them, but it must notify the Employer of its choice in good time prior to appointing any selected Subcontractor. In accordance with GC Sub-Clause 19.1, the Contractor is free to submit proposals for Subcontractors for additional items from time to time. No Subcontracts shall be placed with any such Subcontractors for additional items until the Subcontractors have been approved in writing by the Employer and their names have been added to this list of Approved Subcontractors.

Major Items of Plant and Installation Services	Approved Subcontractors/Manufacturers N/A	Nationality

Appendix 6. Scope of Works and Supply by the Employer

The following personnel, facilities, works and supplies will be provided/supplied by the Employer, and the provisions of GC Clauses 10, 21 and 24 shall apply as appropriate.

All personnel, facilities, works and supplies will be provided by the Employer in good time so as not to delay the performance of the Contractor, in accordance with the approved Time Schedule and Program of Performance pursuant to GC Sub-Clause 18.2.

Unless otherwise indicated, all personnel, facilities, works and supplies will be provided free of charge to the Contractor.

Personnel	N/A
Facilities	N/A
Works	N/A

Supplies

The Goods supplied by the Employer include; Prepaid Meters & MCBs.

Appendix 7. List of Documents for Approval or Review

Pursuant to GC Sub-Clause 20.3.1, the Contractor shall prepare, or cause its Subcontractor to prepare, and present to the Project Manager in accordance with the requirements of GC Sub-Clause 18.2 (Program of Performance), the following documents for

Approval

- Change in contractor's Project organizational structure and key personnel.
- Change in supplier/manufacturer of major items
- Any Change orders
- Contractor's work program.
- Materials/ Equipment specifications including manufacturer's drawings and Tests.
- Pre-commissioning inspections and test results.
- Change of subcontractors.

Review

- Monthly progress reports.
- Final Progress Report after installation of all facilities before issuance of operational Acceptance Certificates.
- Final "As Built" Drawings.

Appendix 8. Functional Guarantees

Not Applicable