



**PROCURING ENTITY: KenGen DEFINED CONTRIBUTION (DC) SCHEME**

<b>TENDER NUMBER</b>	<b>KenGenSRBS/T015/2022</b>
<b>TENDER DESCRIPTION</b>	<b>PROPOSED CONSTRUCTION OF A PERIMETER WALL ON SCHEME'S REDHILL LAND</b>
<b>PROCUREMENT METHOD</b>	<b>OPEN TENDERING</b>
<b>INVITATION DATE</b>	<b>12<sup>TH</sup> OCTOBER, 2022</b>
<b>SUBMISSION DATE</b>	<b>31<sup>ST</sup> OCTOBER 2022 AT 10:30 AM</b>

The Trust Secretary,  
KenGen Staff Retirement Benefits Scheme,  
P.O BOX 47936 – 000100,  
KenGen Pension Plaza 2, 11<sup>th</sup> Floor,  
Kolobot Road, Parklands.  
Nairobi. Tel No: 0711036286  
/0711036932.  
EMAIL: [tenders@kengensrbs.co.ke](mailto:tenders@kengensrbs.co.ke)

OCTOBER 2022.

ALL CANDIDATES ARE ADVISED TO READ CAREFULLY THIS TENDER DOCUMENT IN ITS ENTIRETY  
BEFORE MAKING ANY BID.

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## INVITATION TO TENDER

### PROCURING ENTITY: KenGen STAFF RETIREMENT BENEFITS SCHEME

### TENDER NAME: CONSTRUCTION OF PERIMETER WALL AT REDHILL LAND

1. The Scheme invites sealed tenders for Construction of Perimeter Wall at Redhill Land.
2. Tendering will be conducted under Open Tendering method using a standardized tender document.
3. Qualified and interested tenderers may obtain further information and inspect the Tender Documents during office hours., **0830 to 1600 hours** at the Scheme's Procurement Office, located on 11<sup>th</sup> Floor, Pension Plaza 2, Kolobot Road.
4. A complete set of tender documents may be purchased or obtained by interested tenders upon payment of a non-refundable fees of Kenya shillings 1,000 in cash or Banker's Cheque. Tender documents may be obtained electronically from the Scheme's Website(s) [www.kengensrbs.co.ke](http://www.kengensrbs.co.ke) or [www.tenders.go.ke](http://www.tenders.go.ke) documents obtained electronically will be free of charge.
5. Tender documents may be viewed and downloaded for free from the [www.kengensrbs.co.ke](http://www.kengensrbs.co.ke) or [www.tenders.go.ke](http://www.tenders.go.ke). Tenderers who download the tender document must forward their particulars immediately to [tenders@kengensrbs.co.ke](mailto:tenders@kengensrbs.co.ke) to facilitate any further clarification or addendum.
6. **The Tenderer shall chronologically serialize all pages of the tender documents submitted, in sequence of 1, 2, 3....**
7. Completed tenders must be delivered to the address below on or **before 31<sup>st</sup> October 2022 at 10:30 am** Electronic Tenders will not be permitted.
8. Tenders will be opened immediately after the deadline date and time specified above or any deadline date and time specified later. Tenders will be publicly opened in the presence of the Tenderers' designated representatives who choose to attend at the address below.
9. Late tenders will be rejected.
10. The addresses referred to above are:

**A. Address for obtaining further information and for purchasing tender documents**

KenGen Staff Retirement Benefits Scheme,  
Tender Box on Eleventh (11<sup>th</sup>) Floor of KenGen Pension Plaza 2  
P.O BOX 47936 – 000100,  
Kolobot Road – Nairobi Kenya.

**B. Address for Submission of Tenders.**

Trust Secretary  
KenGen Staff Retirement Benefits Scheme,  
**Tender Box on Eleventh (11<sup>th</sup>) Floor of KenGen Pension Plaza 2,**  
P.O BOX 47936 – 000100,  
Kolobot Road – Nairobi Kenya.

**C. Address for Opening of Tenders.**

KenGen Staff Retirement Benefits Scheme,  
Boardroom located on Eleventh (11<sup>th</sup>) Floor of KenGen Pension Plaza 2

[Authorized Official (name, designation, Signature, and date)]

Name. **J. Muriuki.**

Designation CEO/ Trust Secretary

Signature JM

Date 12<sup>th</sup> October 2022.

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## **PART 1 ~ TENDERING PROCEDURES**

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## SECTION I: INSTRUCTIONS TO TENDERERS

### A General Provisions

#### 1. Scope of Tender

- 1.1 The Scheme as defined in the Appendix to Conditions of Contract invites tenders for Works Contract as described in the tender documents. The name, identification, and number of this Tender Document are **specified in the TDS**.

#### 2. Fraud and Corruption

- 2.1 The Scheme requires compliance with the provisions of the Public Procurement and Asset Disposal Act, 2015, Section 62 “Declaration not to engage in corruption”. The tender submitted by a person shall include a declaration that the person shall not engage in any corrupt or fraudulent practice and a declaration that the person or his or her sub-contractors are not debarred from participating in public procurement proceedings.
- 2.2 The Scheme requires compliance with the provisions of the Competition Act 2010, regarding collusive practices in contracting. Any tenderer found to have engaged in collusive conduct shall be disqualified and criminal and/or civil sanctions may be imposed. To this effect, Tenders shall be required to complete and sign the “Certificate of Independent Tender Determination” annexed to the Form of Tender.
- 2.3 Unfair Competitive Advantage - Fairness and transparency in the tender process require that the firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender. To that end, the Scheme shall indicate in the **Data Sheet** and make available to all the firms together with this tender document all information that would in that respect give such firm any unfair competitive advantage over competing firms.
- 2.4 Unfair Competitive Advantage - Fairness and transparency in the tender process require that the Firms or their Affiliates competing for a specific assignment do not derive a competitive advantage from having provided consulting services related to this tender being tendered for. The Scheme shall indicate in the **TDS** firms (if any) that provided consulting services for the contract being tendered for. The Scheme shall check whether the owners or controllers of the Tenderer are same as those that provided consulting services. The Scheme shall, upon request, make available to any tenderer information that would give such firm unfair competitive advantage over competing firms.

#### 3. Eligible Tenderers

- 3.1 A Tenderer may be a firm that is a private entity, a state-owned enterprise or institution subject to ITT 3.7 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. Public employees and their close relatives (*spouses, children, brothers, sisters and uncles and aunts*) are not eligible to participate in the tender. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire 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 tendering process and, in the event the JV is awarded the Contract, during contract execution. The maximum number of JV members shall be specified in the **TDS**.
- 3.2 Public Officers of the Procuring Entity, their Spouses, Child, Parent, Brothers or Sister. Child, Parent, Brother or Sister of a Spouse, their business associates or agents and firms/organizations in which they have a substantial or controlling interest shall not be eligible to tender or be awarded a contract. Public Officers are also not allowed to participate in any procurement proceedings.
- 3.3 A Tenderer shall not have a conflict of interest. Any tenderer found to have a conflict of interest shall be disqualified. A tenderer may be considered to have a conflict of interest for the purpose of this tendering process, if the tenderer:
- Directly or indirectly controls, is controlled by or is under common control with another tenderer; or
  - Receives or has received any direct or indirect subsidy from another tenderer; or
  - Has the same legal representative as another tenderer; or
  - Has a relationship with another tenderer, directly or through common third parties, that puts it in a position

to influence the tender of another tenderer, or influence the decisions of the Scheme regarding this tendering process; or

- e) 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 tender; or
- f) any of its affiliates has been hired (or is proposed to be hired) by the Scheme as Engineer for the Contract implementation; or
- g) Would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the contract specified in this Tender Document or
- h) Has a close business or family relationship with a professional staff of the Scheme who:
  - i) are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender 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 Scheme throughout the tendering process and execution of the Contract.

3.4 A tenderer shall not be involved in corrupt, coercive, obstructive, collusive, or fraudulent practice. A tenderer that is proven to have been involved any of these practices shall be automatically disqualified.

3.5 A Tenderer (either individually or as a JV member) shall not participate in more than one Tender, except for permitted alternative tenders. This includes participation as a subcontractor in other Tenders. Such participation shall result in the disqualification of all Tenders in which the firm is involved. A firm that is not a tenderer, or a JV member may participate as a subcontractor in more than one tender. Members of a joint venture may not also make an individual tender, be a subcontractor in a separate tender or be part of another joint venture for the purposes of the same Tender.

3.6 A Tenderer may have the nationality of any country, subject to the restrictions pursuant to ITT 4.8.A Tenderer shall be deemed to have the nationality of a country if the Tenderer is constituted, incorporated, or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or sub- consultants for any part of the Contract including related Services.

3.7 Tenderer that has been debarred from participating in public procurement shall be ineligible to tender or be awarded a contract. The list of debarred firms and individuals is available from the website of PPRA [www.ppra.go.ke](http://www.ppra.go.ke).

3.8 Tenderers that are state-owned enterprises or institutions may be eligible to compete and be awarded a Contract(s) only if they are accredited by PPRA to be (i) a legal public entity of the state Government and/or public administration, (ii) financially autonomous and not receiving any significant subsidies or budget support from any public entity or Government, and (iii) operating under commercial law and vested with legal rights and liabilities similar to any commercial enterprise to enable it compete with firms in the private sector on an equal basis.

3.9 A Firms and individuals may be ineligible if their countries of origin (a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country, or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country. A tenderer shall provide such documentary evidence of eligibility satisfactory to the Procuring Entity, as the Scheme shall reasonably request.

3.10 Foreign tenderers are required to source at least forty (40%) percent of their contract inputs (in supplies, subcontracts, and labor) from national suppliers and contractors. To this end, a foreign tenderer shall provide in its tender documentary evidence that this requirement is met. Foreign tenderers not meeting this criterion will be automatically disqualified. Information required to enable the Scheme to determine if this condition is met shall be provided in for this purpose is be provided in *“SECTION III - EVALUATION AND QUALIFICATION CRITERIA, Item 9”*.

3.11 Pursuant to the eligibility requirements of ITT 4.10, a tender is considered a foreign tenderer, if the tenderer is not registered in Kenya or if the tenderer is registered in Kenya and has less than 51 percent ownership by Kenyan



Citizens. JVs are considered as foreign tenderers if the individual member firms are not registered in Kenya or if are registered in Kenya and have less than 51 percent ownership by Kenyan citizens. The JV shall not subcontract to foreign firms more than 10 percent of the contract price, excluding provisional sums.

3.12 The National Construction Authority Act of Kenya requires that all local and foreign contractors be registered with the National Construction Authority and be issued with a Registration Certificate before they can undertake any construction works in Kenya. Registration shall not be a condition for tender, but it shall be a condition of contract award and signature. A selected tenderer shall be given opportunity to register before such award and signature of contract. Application for registration with National Construction Authority may be accessed from the website [www.nca.go.ke](http://www.nca.go.ke).

3.13 The Competition Act of Kenya requires that firms wishing to tender as Joint Venture undertakings which may prevent, distort, or lessen competition in provision of services are prohibited unless they are exempt in accordance with the provisions of Section 25 of the Competition Act, 2010. JVs will be required to seek for exemption from the Competition Authority. Exemption shall not be a condition for tender, but it shall be a condition of contract award and signature. A JV tenderer shall be given opportunity to seek such exemption as a condition of award and signature of contract. Application for exemption from the Competition Authority of Kenya may be accessed from the website [www.cak.go.ke](http://www.cak.go.ke)

3.14 A Kenyan tenderer shall provide evidence of having fulfilled his/her tax obligations by producing a valid tax clearance certificate or tax exemption certificate issued by the Kenya Revenue Authority.

#### **4. Eligible Goods, Equipment, and Services**

4.1 Goods, equipment, and services to be supplied under the Contract may have their origin in any country that is not eligible under ITT 3.9. At the Procuring Entity's request, Tenderers may be required to provide evidence of the origin of Goods, equipment, and services.

4.2 Any goods, works and production processes with characteristics that have been declared by the relevant national environmental protection agency or by other competent authority as harmful to human beings and to the environment shall not be eligible for procurement.

#### **5. Tenderer's Responsibilities**

5.1 The tenderer shall bear all costs associated with the preparation and submission of his/her tender, and the Scheme will in no case be responsible or liable for those costs.

5.2 The tenderer, at the tenderer's own responsibility and risk, is encouraged to visit and examine the Site of the Works and its surroundings and obtain all information that may be necessary for preparing the tender and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the tenderer's own expense.

5.3 The Tenderer and any of its personnel or agents will be granted permission by the Scheme to enter upon its premises and lands for the purpose of such visit. The Tenderer shall indemnify the Scheme against all liability arising from death or personal injury, loss of or damage to property, and any other losses and expenses incurred as a result of the inspection.

5.4 The tenderer shall provide in the Form of Tender and Qualification Information, a preliminary description of the proposed work method and schedule, including charts, as necessary or required.

#### **B. Contents of Tender Documents**

##### **6. Sections of Tender Document**

6.1 The tender document consists of Parts 1, 2, and 3, which includes all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITT 8.

## **PART 1 Tendering Procedures**

- i) Section I - Instructions to Tenderers (ITT)
- ii) Section II - Tender Data Sheet (TDS)
- iii) Section III - Evaluation and Qualification Criteria
- iv) Section IV - Tendering Forms

## **PART 2 Works Requirements**

- i) Section V - Drawings
- ii) Section VI - Specifications
- iii) Section VII - Bills of Quantities

## **PART 3 Conditions of Contract and Contract Forms**

- i) Section VIII - General Conditions of Contract (GCC)
- ii) Section IX - Special Conditions of Contract (SC)
- iii) Section X - Contract Forms

6.2 The Invitation to Tender Document (ITT) issued by the Scheme is not part of the Contract documents.

6.3 Unless obtained directly from the Procuring Entity, the Scheme is not responsible for the completeness of the Tender document, responses to requests for clarification, the minutes of the pre-Tender meeting (if any), or Addenda to the Tender document in accordance with ITT 8. In case of any contradiction, documents obtained directly from the Scheme shall prevail.

The Tenderer is expected to examine all instructions, forms, terms, and specifications in the Tender Document and to furnish with its Tender all information and documentation as is required by the Tender document.

## **7. Site Visit**

7.1 The Tenderer, at the Tenderer's own responsibility and risk, is encouraged to visit and examine and inspect the Site of the Required Services and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for the Services. The costs of visiting the Site shall be at the Tenderer's own expense.

## **8. Pre-Tender Meeting**

8.1 The Scheme shall specify in the **TDS** if a pre-tender meeting will be held, when and where. The Scheme shall also specify in the **TDS** if a pre-arranged pretender site visit will be held and when. The Tenderer's designated representative is invited to attend a pre-arranged pretender visit of the site of the works. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

8.2 The Tenderer is requested to submit any questions in writing, to reach the Scheme not later than the period specified in the **TDS** before the meeting.

8.3 Minutes of the pre-Tender meeting and the pre-arranged pretender site visit of the site of the works, if applicable, including the text of the questions asked by Tenderers and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Tenderers who have acquired the Tender Documents in accordance with ITT 6.3. Minutes shall not identify the source of the questions asked.

8.4 The Scheme shall also promptly publish anonym zed (*no names*) Minutes of the pre-Tender meeting and the pre-arranged pretender visit of the site of the works at the web page identified in the **TDS**. Any modification to the Tender Documents that may become necessary as a result of the pre-tender meeting and the pre-arranged pretender site visit, shall be made by the Scheme exclusively through the issue of an Addendum pursuant to ITT 8 and not through the minutes of the pre-Tender meeting. Nonattendance at the pre-Tender meeting will not be a cause for disqualification of a Tenderer.

## **9. Clarification and amendments of Tender Documents**

9.1 A Tenderer requiring any clarification of the Tender Document shall contact the Scheme in writing at the Procuring Entity's address specified in the **TDS** or raise its enquiries during the pre-Tender meeting and the pre-arranged pretender visit of the site of the works if provided for in accordance with ITT 8.4. The Scheme will respond in writing to any request for clarification, provided that such request is received no later than the period specified in the **TDS** prior to the deadline for submission of tenders. The Scheme shall forward copies of

its response to all tenderers who have acquired the Tender Documents in accordance with ITT 6.3, including a description of the inquiry but without identifying its source. If specified in the **TDS**, the Scheme shall also promptly publish its response at the web page identified in the **TDS**. Should the clarification result in changes to the essential elements of the Tender Documents, the Scheme shall amend the Tender Documents appropriately following the procedure under ITT 8.4.

## **10. Amendment of Tendering Document**

10.1 At any time prior to the deadline for submission of Tenders, the Scheme may amend the Tendering document by issuing addenda.

10.2 Any addendum issued shall be part of the tendering document and shall be communicated in writing to all who have obtained the tendering document from the Scheme in accordance with ITT 6.3. The Scheme shall also promptly publish the addendum on the Procuring Entity's web page in accordance with ITT 8.4.

10.3 To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Scheme shall extend, as necessary, the deadline for submission of Tenders, in accordance with ITT 25.2 below.

## **C. Preparation of Tenders**

### **11. Cost of Tendering**

11.1 The Tenderer shall bear all costs associated with the preparation and submission of its Tender, and the Scheme shall not be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

### **12. Language of Tender**

12.1 The Tender, as well as all correspondence and documents relating to the tender exchanged by the tenderer and the Procuring Entity, shall be written in the English Language. Supporting documents and printed literature that are part of the Tender may be in another language provided they are accompanied by an accurate and notarized translation of the relevant passages into the English Language, in which case, for purposes of interpretation of the Tender, such translation shall govern.

### **13. Documents Comprising the Tender**

13.1 The Tender shall comprise the following:

- a) Form of Tender prepared in accordance with ITT 14;
- b) Schedules including priced Bill of Quantities, completed in accordance with ITT 14 and ITT 16;
- c) Tender Security or Tender-Securing Declaration, in accordance with ITT 21.1;
- d) Alternative Tender, if permissible, in accordance with ITT 15;
- e) Authorization: written confirmation authorizing the signatory of the Tender to commit the Tenderer, in accordance with ITT 22.3;
- f) Qualifications: documentary evidence in accordance with ITT 19 establishing the Tenderer's qualifications to perform the Contract if its Tender is accepted;
- g) Conformity: a technical proposal in accordance with ITT 18;
- h) Any other document required in the **TDS**.

13.2 In addition to the requirements under ITT 11.1, Tenders 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 Tender shall be signed by all members and submitted with the Tender,

together with a copy of the proposed Agreement. The Tenderer shall chronologically serialize pages of all tender documents submitted.

13.3 The Tenderer shall furnish in the Form of Tender information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Tender.

#### **14. Form of Tender and Schedules**

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

#### **15. Alternative Tenders**

15.1 Unless otherwise specified in the **TDS**, alternative Tenders shall not be considered.

15.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the **TDS**, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.

15.3 Except as provided under ITT 13.4 below, Tenderers wishing to offer technical alternatives to the requirements of the Tender Documents must first price the Procuring Entity's design as described in the Tender Documents and shall further provide all information necessary for a complete evaluation of the alternative by the Procuring Entity, 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 Tenderer with the Winning Tender conforming to the basic technical requirements shall be considered by the Procuring Entity. When specified in the **TDS**, Tenderers are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified in the **TDS**, as will the method for their evaluating, and described in Section VII, Works' Requirements.

#### **16. Tender Prices and Discounts**

16.1 The prices and discounts (including any price reduction) quoted by the Tenderer in the Form of Tender and in the Bill of Quantities shall conform to the requirements specified below.

16.2 The Tenderer 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 Tenderer shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Procuring Entity. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Tender, and provided that the Tender is determined substantially responsive notwithstanding this omission, the average price of the item quoted by substantially responsive Tenderers will be added to the Tender price and the equivalent total cost of the Tender so determined will be used for price comparison.

16.3 The price to be quoted in the Form of Tender, in accordance with ITT 14.1, shall be the total price of the Tender, including any discounts offered.

16.4 The Tenderer shall quote any discounts and the methodology for their application in the Form of Tender, in accordance with ITT 14.1.

16.5 It will be specified in the **TDS** if the rates and prices quoted by the Tenderer are or are not subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, except in cases where the contract is subject to fluctuations and adjustments, not fixed price. In such a case, the Tenderer shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Scheme may require the Tenderer to justify its proposed indices and weightings.

16.6 Where tenders are being invited for individual lots (contracts) or for any combination of lots (packages), tenderers wishing to offer discounts for the award of more than one Contract shall specify in their Tender the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITT 16.4, provided the Tenders for all lots (contracts) are opened at the same time.

16.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of Tenders, shall be included in the rates and prices and

the total Tender Price submitted by the Tenderer.

## **17. Currencies of Tender and Payment**

17.1 Tenderers shall quote entirely in Kenya Shillings. The unit rates and the prices shall be quoted by the Tenderer in the Bill of Quantities, entirely in Kenya shillings. A Tenderer expecting to incur expenditures in other currencies for inputs to the Works supplied from outside Kenya shall device own ways of getting foreign currency to meet those expenditures.

## **18. Documents Comprising the Technical Proposal**

18.1 The Tenderer shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Tender Forms, in sufficient detail to demonstrate the adequacy of the Tenderer's proposal to meet the work's requirements and the completion time.

## **19. Documents Establishing the Eligibility and Qualifications of the Tenderer**

19.1 Tenderers shall complete the Form of Tender, included in Section IV, Tender Forms, to establish Tenderer's eligibility in accordance with ITT 4.

19.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract the Tenderer shall provide the information requested in the corresponding information sheets included in Section IV, Tender Forms.

19.3 A margin of preference will not be allowed. Preference and reservations will be allowed, individually or in joint ventures. Applying for eligibility for Preference and reservations shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITT 33.1.

19.4 Tenderers shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Procuring Entity, a contractor or group of contractors qualifies for a margin of preference. Further the information will enable the Scheme identify any actual or potential conflict of interest in relation to the procurement and/or contract management processes, or a possibility of collusion between tenderers, and thereby help to prevent any corrupt influence in relation to the procurement process or contract management.

19.5 The purpose of the information described in ITT 19.4 above overrides any claims to confidentiality which a tenderer may have. There can be no circumstances in which it would be justified for a tenderer to keep information relating to its ownership and control confidential where it is tendering to undertake public sector work and receive public sector funds. Thus, confidentiality will not be accepted by the Scheme as a justification for a Tenderer's failure to disclose, or failure to provide required information on its ownership and control.

19.6 The Tenderer shall provide further documentary proof, information or authorizations that the Scheme may request in relation to ownership and control which information on any changes to the information which was provided by the tenderer under ITT 6.3. The obligations to require this information shall continue for the duration of the procurement process and contract performance and after completion of the contract, if any change to the information previously provided may reveal a conflict of interest in relation to the award or management of the contract.

19.7 All information provided by the tenderer pursuant to these requirements must be complete, current and accurate as at the date of provision to the Procuring Entity. In submitting the information required pursuant to these requirements, the Tenderer shall warrant that the information submitted is complete, current and accurate as at the date of submission to the Procuring Entity.

19.8 If a tenderer fails to submit the information required by these requirements, its tender will be rejected. Similarly, if the Scheme is unable, after taking reasonable steps, to verify to a reasonable degree the information submitted by a tenderer pursuant to these requirements, then the tender will be rejected.

19.9 If information submitted by a tenderer pursuant to these requirements, or obtained by the Scheme (whether through its own enquiries, through notification by the public or otherwise), shows any conflict of interest which could materially and improperly benefit the tenderer in relation to the procurement or contract management process, then:

- i) if the procurement process is still ongoing, the tenderer will be disqualified from the procurement



- process,
- ii) if the contract has been awarded to that tenderer, the contract award will be set aside,
  - iii) the tenderer will be referred to the relevant law enforcement authorities for investigation of whether the tenderer or any other persons have committed any criminal offence.

19.10 If a tenderer submits information pursuant to these requirements that is incomplete, inaccurate, or out-of-date, or attempts to obstruct the verification process, then the consequences ITT 6.7 will ensue unless the tenderer can show to the reasonable satisfaction of the Scheme that any such act was not material or was due to genuine error which was not attributable to the intentional act, negligence or recklessness of the tenderer.

## 20. Period of Validity of Tenders

20.1 Tenders shall remain valid for the Tender Validity period specified in the **TDS**. The Tender Validity period starts from the date fixed for the Tender submission deadline (as prescribed by the Scheme in accordance with ITT 24). A Tender valid for a shorter period shall be rejected by the Scheme as non-responsive.

20.2 In exceptional circumstances, prior to the expiration of the Tender validity period, the Scheme may request Tenderers to extend the period of validity of their Tenders. The request and the responses shall be made in writing. If a Tender Security is requested in accordance with ITT 21.1, it shall also be extended for thirty (30) days beyond the deadline of the extended validity period. A Tenderer may refuse the request without forfeiting its Tender security. A Tenderer granting the request shall not be required or permitted to modify its Tender, except as provided in ITT 20.3.

20.3 If the award is delayed by a period exceeding the number of days to be specified in the **TDS** days beyond the expiry of the initial tender validity period, the Contract price shall be determined as follows:

- a) in the case of **fixed price** contracts, the Contract price shall be the tender price adjusted by the factor specified in the **TDS**.
- b) in the case of **adjustable price** contracts, no adjustment shall be made; or in any case, tender evaluation shall be based on the tender price without taking into consideration the applicable correction from those indicated above.

## 21. Tender Security

21.1 The Tenderer shall furnish as part of its Tender, either a Tender-Securing Declaration or a Tender Security as specified in the **TDS**, in original form and, in the case of a Tender Security, in the amount and currency specified in the **TDS**. A Tender-Securing Declaration shall use the form included in Section IV, Tender Forms.

21.2 If a Tender Security is specified pursuant to ITT 19.1, the Tender Security shall be a demand guarantee in any of the following forms at the Tenderer's option:

- a) an unconditional Bank Guarantee issued by reputable commercial bank); or
- b) an irrevocable letter of credit.
- c) a Banker's cheque issued by a reputable commercial bank; or
- d) another security specified in the **TDS**,

21.3 If an unconditional bank guarantee is issued by a bank located outside Kenya, the issuing bank shall have a correspondent bank located in Kenya to make it enforceable. The Tender Security shall be valid for thirty (30) days beyond the original validity period of the Tender, or beyond any period of extension if requested under ITT 20.2.

21.4 If a Tender Security or Tender-Securing Declaration is specified pursuant to ITT 19.1, any Tender not accompanied by a substantially responsive Tender Security or Tender-Securing Declaration shall be rejected by the Scheme as non-responsive.

21.5 If a Tender Security is specified pursuant to ITT 21.1, the Tender Security of unsuccessful Tenderers shall be returned as promptly as possible upon the successful Tenderer's signing the Contract and furnishing the Performance Security and any other documents required in the **TDS**. The Scheme shall also promptly return the tender security to the tenderers where the procurement proceedings are terminated, all tenders were determined nonresponsive, or a bidder declines to extend tender validity period.

21.6 The Tender Security of the successful Tenderer shall be returned as promptly as possible once the successful Tenderer has signed the Contract and furnished the required Performance Security, and any other documents required in the **TDS**.

21.7 The Tender Security may be forfeited, or the Tender-Securing Declaration executed:

- e) if a Tenderer withdraws its Tender during the period of Tender validity specified by the Tenderer on the Form of Tender, or any extension thereto provided by the Tenderer; or
- f) if the successful Tenderer fails to:
  - i) sign the Contract in accordance with ITT 50; or
  - ii) furnish a Performance Security and if required in the **TDS**, and any other documents required in the **TDS**.

21.8 Where tender securing declaration is executed, the Scheme shall recommend to the PPRA that PPRA debars the Tenderer from participating in public procurement as provided in the law.

21.9 The Tender Security or the Tender-Securing Declaration of a JV shall be in the name of the JV that submits the Tender. If the JV has not been legally constituted into a legally enforceable JV at the time of tendering, the Tender Security or the Tender-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITT 4.1 and ITT 11.2.

21.10 A tenderer shall not issue a tender security to guarantee itself.

## **22. Format and Signing of Tender**

22.1 The Tenderer shall prepare one original of the documents comprising the Tender as described in ITT 13 and clearly mark it "ORIGINAL." Alternative Tenders, if permitted in accordance with ITT 15, shall be clearly marked "ALTERNATIVE." In addition, the Tenderer shall submit copies of the Tender, in the number specified in the **TDS** and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

22.2 Tenderers shall mark as "CONFIDENTIAL" all information in their Tenders which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

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

22.4 In case the Tenderer is a JV, the Tender shall be signed by an authorized representative of the JV on behalf of the JV, and to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

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

## **D. Submission and Opening of Tenders**

### **23. Sealing and Marking of Tenders**

23.1 Depending on the sizes or quantities or weight of the tender documents, a tenderer may use an envelope, package or container. The Tenderer shall deliver the Tender in a single sealed envelope, or in a single sealed package, or in a single sealed container bearing the name and Reference number of the Tender, addressed to the Scheme and a warning not to open before the time and date for Tender opening date. Within the single envelope, package or container, the Tenderer shall place the following separate, sealed envelopes:

- a) in an envelope or package or container marked "ORIGINAL", all documents comprising the Tender, as described in ITT 11; and
- b) in an envelope or package or container marked "COPIES", all required copies of the Tender; and
- c) if alternative Tenders are permitted in accordance with ITT 15, and if relevant:
  - i) in an envelope or package or container marked "ORIGINAL –ALTERNATIVE TENDER", the alternative Tender; and
  - ii) in the envelope or package or container marked "COPIES- ALTERNATIVE TENDER", all required copies of the alternative Tender.

The inner envelopes or packages or containers shall:

- a) bear the name and address of the Procuring Entity.
- b) bear the name and address of the Tenderer; and
- c) bear the name and Reference number of the Tender.

23.2 If an envelope or package or container is not sealed and marked as required, the *Scheme* will assume no responsibility for the misplacement or premature opening of the Tender. Tenders that are misplaced or opened prematurely will not be accepted.

#### **24. Deadline for Submission of Tenders**

24.1 Tenders must be received by the Scheme at the address specified in the **TDS** and no later than the date and time also specified in the **TDS**. When so specified in the **TDS**, Tenderers shall have the option of submitting their Tenders electronically. Tenderers submitting Tenders electronically shall follow the electronic Tender submission procedures specified in the **TDS**.

24.2 The Scheme may, at its discretion, extend the deadline for the submission of Tenders by amending the Tender Documents in accordance with ITT 8, in which case all rights and obligations of the Scheme and Tenderers previously subject to the deadline shall thereafter be subject to the deadline as extended.

#### **25. Late Tenders**

25.1 The Scheme shall not consider any Tender that arrives after the deadline for submission of tenders, in accordance with ITT 24. Any Tender received by the Scheme after the deadline for submission of Tenders shall be declared late, rejected, and returned unopened to the Tenderer.

#### **26. Withdrawal, Substitution, and Modification of Tenders**

26.1 A Tenderer may withdraw, substitute, or modify its Tender 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 ITT 22.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Tender must accompany the respective written notice. All notices must be:

- a) prepared and submitted in accordance with ITT 22 and ITT 23 (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 Scheme prior to the deadline prescribed for submission of Tenders, in accordance with ITT 24.

26.2 Tenders requested to be withdrawn in accordance with ITT 26.1 shall be returned unopened to the Tenderers.

26.3 No Tender may be withdrawn, substituted, or modified in the interval between the deadline for submission of Tenders and the expiration of the period of Tender validity specified by the Tenderer on the Form of Tender or any extension thereof.

#### **27. Tender Opening**

27.1 Except in the cases specified in ITT 23 and ITT 26.2, the Scheme shall publicly open and read out all Tenders received by the deadline, at the date, time and place specified in the **TDS**, in the presence of Tenderers' designated representatives who chooses to attend. Any specific electronic Tender opening procedures required if electronic Tendering is permitted in accordance with ITT 24.1, shall be as specified in the **TDS**.

27.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelopes with the corresponding Tender shall not be opened but returned to the Tenderer. No Tender withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Tender opening.

27.3 Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Tender being substituted, and the substituted Tender shall not be opened, but returned to the Tenderer. No Tender substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Tender opening.

27.4 Next, envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Tender. No Tender modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Tender opening.



27.5 Next, all remaining envelopes shall be opened one at a time, reading out: the name of the Tenderer and whether there is a modification; the total Tender Price, per lot (contract) if applicable, including any discounts and alternative Tenders; the presence or absence of a Tender Security or Tender-Securing Declaration, if required; and any other details as the Scheme may consider appropriate.

27.6 Only Tenders, alternative Tenders and discounts that are opened and read out at Tender opening shall be considered further for evaluation. The Form of Tender and pages of the Bills of Quantities are to be initialed by the members of the tender opening committee attending the opening. The number of representatives of the Scheme to sign shall be specified in the **TDS**.

27.7 At the Tender Opening, the Scheme shall neither discuss the merits of any Tender nor reject any Tender (except for late Tenders, in accordance with ITT 25.1).

27.8 The Scheme **shall prepare minutes of the Tender Opening that shall include, as a minimum:**

- a) the name of the Tenderer and whether there is a withdrawal, substitution, or modification.
- b) the Tender Price, per lot (contract) if applicable, including any discounts;
- c) any alternative Tenders;
- d) the presence or absence of a Tender Security, if one was required.
- e) number of pages of each tender document submitted.

27.9 The Tenderers' representatives who are present shall be requested to sign the minutes. The omission of a Tenderer's signature on the minutes shall not invalidate the contents and effect of the minutes. A copy of the tender opening register shall be distributed to all Tenderers upon request.

## **E. Evaluation and Comparison of Tenders**

### **28. Confidentiality**

28.1 Information relating to the evaluation of Tenders and recommendation of contract award shall not be disclosed to Tenderers or any other persons not officially concerned with the Tender process until information on Intention to Award the Contract is transmitted to all Tenderers in accordance with ITT 46.

28.2 Any effort by a Tenderer to influence the Scheme in the evaluation of the Tenders or Contract award decisions may result in the rejection of its tender.

28.3 Notwithstanding ITT 28.2, from the time of tender opening to the time of contract award, if a tenderer wishes to contact the Scheme on any **matter related to the tendering process, it shall do so in writing.**

### **29. Clarification of Tenders**

29.1 To assist in the examination, evaluation, and comparison of the tenders, and qualification of the tenderers, the Scheme may, at its discretion, ask any tenderer for a clarification of its tender, given a reasonable time for a response. Any clarification submitted by a tenderer that is not in response to a request by the Scheme shall not be considered. The Procuring Entity'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 tender shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Scheme in the evaluation of the tenders, in accordance with ITT 33.

29.2 If a tenderer does not provide clarifications of its tender by the date and time set in the Procuring Entity's request for clarification, its Tender may be rejected.

### **30. Deviations, Reservations, and Omissions**

30.1 During the evaluation of tenders, the following definitions apply:

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

### **31. Determination of Responsiveness**

31.1 The Procuring Entity's determination of a Tender's responsiveness is to be based on the contents of the tender itself, as defined in ITT 13.

31.2 A substantially responsive Tender is one that meets the requirements of the Tender document without material deviation, reservation, or omission. **A material deviation, reservation, or omission is one that, if accepted, would:**

- a) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
- b) limit in any substantial way, inconsistent with the tender document, the Procuring Entity's rights or the tenderer's obligations under the proposed contract; or
- c) if rectified, would unfairly affect the competitive position of other tenderers presenting substantially responsive tenders.

31.3 The Scheme shall examine the technical aspects of the tender submitted in accordance with ITT 18, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.

31.4 If a tender is not substantially responsive to the requirements of the tender document, it shall be rejected by the Scheme and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

### **32. Non-material non-conformities**

32.1 Provided that a tender is substantially responsive, the Scheme may waive any non-conformities in the tender.

32.2 Provided that a Tender is substantially responsive, the Scheme may request that the tenderer submit the necessary information or documentation, within a reasonable period, to rectify nonmaterial non-conformities in the tender related to documentation requirements. Requesting information or documentation on such non-conformities shall not be related to any aspect of the price of the tender. Failure of the tenderer to comply with the request may result in the rejection of its tender.

32.3 Provided that a tender is substantially responsive, the Scheme shall rectify quantifiable nonmaterial non-conformities related to the Tender Price. To this effect, the Tender Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner specified in the TDS.

### **33. Arithmetical Errors**

33.1 The tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment, or amendment in any way by any person or entity.

33.2 Provided that the Tender is substantially responsive, the Scheme shall handle errors on the following basis:

- a) Any error detected if considered a major deviation that affects the substance of the tender, shall lead to disqualification of the tender as non-responsive.
- b) Any errors in the submitted tender arising from a miscalculation of unit price, quantity, and subtotal and total bid price shall be considered as a major deviation that affects the substance of the tender and shall lead to disqualification of the tender as non-responsive. and
- c) if there is a discrepancy between words and figures, the amount in words shall prevail

33.3 Tenderers shall be notified of any error detected in their bid during the notification of a ward.

### **34. Currency provisions**

34.1 Tenders will be priced in Kenya Shillings only. Tenderers quoting in currencies other than in Kenya shillings will be determined non-responsive and rejected.

### **35. Margin of Preference and Reservations**

35.1 No margin of preference shall be allowed on contracts for small works.

35.2 Where it is intended to reserve the contract to specific groups under Small and Medium Enterprises, or enterprise of women, youth and/or persons living with disability, who are appropriately registered as such by the authority to be specified in the **TDS**, a Scheme shall ensure that the invitation to tender specifically indicates that only businesses/firms belonging to those specified groups are the only ones eligible to tender. Otherwise, if no so stated, the invitation will be open to all tenderers.

### **36. Nominated Subcontractors**

36.1 Unless otherwise stated in the **TDS**, the Scheme does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Procuring Entity.

36.2 Tenderers may propose subcontracting up to the percentage of total value of contracts or the volume of works as specified in the **TDS**. Subcontractors proposed by the Tenderer shall be fully qualified for their parts of the Works.

36.3 The subcontractor's qualifications shall not be used by the Tenderer to qualify for the Works unless their specialized parts of the Works were previously designated by the Scheme in the **TDS** as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Tenderer may be added to the qualifications of the Tenderer.

### **37. Evaluation of Tenders**

37.1 The Scheme shall use the criteria and methodologies listed in this ITT and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted. By applying the criteria and methodologies the Scheme shall determine the Best Evaluated Tender in accordance with ITT 40.

37.2 To evaluate a Tender, the Scheme shall consider the following:

- a) price adjustment due to discounts offered in accordance with ITT 16;
- b) converting the amount resulting from applying (a) and (b) above, if relevant, to a single currency in accordance with ITT 39;
- c) price adjustment due to quantifiable nonmaterial non-conformities in accordance with ITT 30.3; and
- d) any additional evaluation factors specified in the **TDS** and Section III, Evaluation and Qualification Criteria.

37.3 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 considered in Tender evaluation.

37.4 In the case of multiple contracts or lots, Tenderers shall be allowed to tender for one or more lots and the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the **Form of Tender**, is specified in Section III, Evaluation and Qualification Criteria.

### **38. Comparison of Tenders**

38.1 The Scheme shall compare the evaluated costs of all substantially responsive Tenders established in accordance with ITT 38.2 to determine the Tender that has the lowest evaluated cost.

### **39. Abnormally Low Tenders**

39.1 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regard to the Tenderer's ability to perform the Contract for the offered Tender Price or that genuine competition between Tenderers is compromised.

39.2 In the event of identification of a potentially Abnormally Low Tender, the Scheme shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.

39.3 After evaluation of the price analyses, in the event that the Scheme determines that the Tenderer has failed to demonstrate its capability to perform the Contract for the offered Tender Price, the Scheme shall reject the Tender.

### **40. Abnormally High Tenders**

40.1 An abnormally high price is one where the tender price, in combination with other constituent elements of

the Tender, appears unreasonably too high to the extent that the Scheme is concerned that it (the Procuring Entity) may not be getting value for money, or it may be paying too high a price for the contract compared with market prices or that genuine competition between Tenderers is compromised.

40.2 In case of an abnormally high tender price, the Scheme shall make a survey of the market prices, check if the estimated cost of the contract is correct and review the Tender Documents to check if the specifications, scope of work and conditions of contract are contributory to the abnormally high tenders. The Scheme may also seek written clarification from the tenderer on the reason for the high tender price. The Scheme shall proceed as follows:

- i) If the tender price is abnormally high based on wrong estimated cost of the contract, the Scheme may accept or not accept the tender depending on the Procuring Entity's budget considerations.
- ii) If specifications, scope of work and/or conditions of contract are contributory to the abnormally high tender prices, the Scheme shall reject all tenders and may retender for the contract based on revised estimates, specifications, scope of work and conditions of contract, as the case may be.

40.3 If the Scheme determines that the Tender Price is abnormally too high because genuine competition between tenderers is compromised (*often due to collusion, corruption or other manipulations*), the Scheme shall reject all Tenders and shall institute or cause competent Government Agencies to institute an investigation on the cause of the compromise, before retendering.

#### **41. Unbalanced and/or Front-Loaded Tenders**

41.1 If in the Procuring Entity's opinion, the Tender that is evaluated as the lowest evaluated price is seriously unbalanced and/or front loaded, the Scheme may require the Tenderer to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the tender prices with the scope of works, proposed methodology, schedule, and any other requirements of the Tender document.

41.2 After the evaluation of the information and detailed price analyses presented by the Tenderer, the Scheme may as appropriate:

- a) accept the Tender; or
- b) require that the total amount of the Performance Security be increased at the expense of the Tenderer to a level not exceeding a 30% of the Contract Price; or
- c) agree on a payment mode that eliminates the inherent risk of the Scheme paying too much for undelivered works; or
- d) reject the Tender,

#### **42. Qualifications of the Tenderer**

42.1 The Scheme shall determine to its satisfaction whether the eligible Tenderer that is selected as having submitted the lowest evaluated cost and substantially responsive Tender, meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

42.2 The determination shall be based upon an examination of the documentary evidence of the Tenderer's qualifications submitted by the Tenderer, pursuant to ITT 19. The determination shall not take into consideration the qualifications of other firms such as the Tenderer's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the Tender document), or any other firm(s) different from the Tenderer.

42.3 An affirmative determination shall be a prerequisite for award of the Contract to the Tenderer. A negative determination shall result in disqualification of the Tender, in which event the Scheme shall proceed to the Tenderer who offers a substantially responsive Tender with the next lowest evaluated price to make a similar determination of that Tenderer's qualifications to perform satisfactorily.

42.4 An Abnormally Low Tender is one where the Tender price, in combination with other elements of the Tender, appears so low that it raises material concerns as to the capability of the Tenderer in regard to the Tenderer's ability to perform the Contract for the offered Tender Price.

42.5 In the event of identification of a potentially Abnormally Low Tender, the Scheme shall seek written clarifications from the Tenderer, including detailed price analyses of its Tender price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Tender document.

42.6 After evaluation of the price analyses, if the Scheme determines that the Tenderer has failed to demonstrate

its capability to perform the Contract for the offered Tender Price, the Scheme shall reject the Tender.

#### **43. Best Evaluated Tender**

43.1 Having compared the evaluated prices of Tenders, the Scheme shall determine the Best Evaluated Tender. The Best Evaluated Tender is the Tender of the Tenderer that meets the Qualification Criteria and whose Tender has been determined to be:

- a) Most responsive to the Tender document; and
- b) the lowest evaluated price.

#### **44. Procuring Entity's Right to Accept Any Tender, and to Reject Any or All Tenders.**

44.1 The Scheme reserves the right to accept or reject any Tender and to annul the Tender process and reject all Tenders at any time prior to Contract Award, without thereby incurring any liability to Tenderers. In case of annulment, all Tenderers shall be notified with reasons and all Tenders submitted and specifically, Tender securities, shall be promptly returned to the Tenderers.

### **F. Award of Contract**

#### **45. Award Criteria**

45.1 The Scheme shall award the Contract to the successful tenderer whose tender has been determined to be the Lowest Evaluated Tender.

#### **46. Notice of Intention to enter into a Contract**

46.1 Upon award of the contract and prior to the expiry of the Tender Validity Period the Scheme shall issue a Notification of Intention to Enter into a Contract / Notification of award to all tenderers which shall contain, at a minimum, the following information:

- a) the name and address of the Tenderer submitting the successful tender.
- b) the Contract price of the successful tender.
- c) a statement of the reason(s) the tender of the unsuccessful tenderer to whom the letter is addressed was unsuccessful unless the price information in (c) above already reveals the reason.
- d) the expiry date of the Standstill Period; and
- e) instructions on how to request a debriefing and/or submit a complaint during the standstill period.

#### **47. Standstill Period**

47.1 The Contract shall not be signed earlier than the expiry of a Standstill Period of 14 days to allow any dissatisfied tender to launch a complaint. Where only one Tender is submitted, the Standstill Period shall not apply.

47.2 Where a Standstill Period applies, it shall commence when the Scheme has transmitted to each Tenderer the Notification of Intention to Enter **into a Contract with the successful Tenderer.**

#### **48. Debriefing by the Procuring Entity**

48.1 On receipt of the Procuring Entity's Notification of Intention to Enter into a Contract referred to in ITT 46, an unsuccessful tenderer may make a written request to the Scheme for a debriefing on specific issues or concerns regarding their tender. The Scheme shall provide the debriefing within five days of receipt of the request.

48.2 Debriefings of unsuccessful Tenderers may be done in writing or verbally. The Tenderer shall bear its own costs of attending **such a debriefing meeting.**

#### **49. Letter of Award**

49.1 Prior to the expiry of the Tender Validity Period and upon expiry of the Standstill Period specified in ITT 42.1, upon addressing a complaint that has been filed within the Standstill Period, the Scheme shall transmit the Letter of Award to the successful Tenderer. The letter of award shall request the successful tenderer to furnish the Performance Security within 21 days of the date of the letter.

#### **50. Signing of Contract**



- 50.1 Upon the expiry of the fourteen days of the Notification of Intention to enter into contract and upon the parties meeting their respective statutory requirements, the Scheme shall send the successful Tenderer the Contract Agreement.
- 50.2 Within fourteen (14) days of receipt of the Contract Agreement, the successful Tenderer shall sign, date, and return it to the Procuring Entity.
- 50.3 The written contract shall be entered into within the period specified in the notification of award and before expiry of the tender validity period
- 51. Appointment of Adjudicator**
- 51.1 The Scheme proposes the person named in the **TDS** to be appointed as Adjudicator under the Contract, at the hourly fee specified in the **TDS**, plus reimbursable expenses. If the Tenderer disagrees with this proposal, the Tenderer should so state in his Tender. If, in the Letter of Acceptance, the Scheme does not agree on the appointment of the Adjudicator, the Scheme will request the Appointing Authority designated in the Special Conditions of Contract (SCC) pursuant to Clause 23.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator.
- 52. Performance Security**
- 52.1 Within twenty-one (21) days of the receipt of the Letter of Acceptance from the Procuring Entity, the successful Tenderer shall furnish the Performance Security and, any other documents required in the **TDS**, in accordance with the General Conditions of Contract, subject to ITT 40.2 (b), using the Performance Security and other Forms included in Section X, Contract Forms, or another form acceptable to the Procuring Entity. A foreign institution providing a bank guarantee shall have a correspondent financial institution located in Kenya, unless the Scheme has agreed in writing that a correspondent bank is not required.
- 52.2 Failure of the successful Tenderer to submit the above-mentioned Performance Security and other documents required in the **TDS** or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security. In that event the Scheme may award the Contract to the Tenderer offering the next Best Evaluated Tender.
- 52.3 Performance security shall not be required for contracts estimated to cost less than Kenya shillings five million shillings.
- 53. Publication of Procurement Contract**
- 53.1 Within fourteen days after signing the contract, the Scheme shall publish the awarded contract at its notice boards and websites; and on the Website of the Authority. At the minimum, the notice shall contain the following information:
- a) name and address of the Procuring Entity.
  - b) name and reference number of the contract being awarded, a summary of its scope and the selection method used;
  - c) the name of the successful Tenderer, the final total contract price, the contract duration.
  - d) dates of signature, commencement, and completion of contract;
  - e) names of all Tenderers that submitted Tenders, and their Tender prices as read out at Tender opening.
- 54. Procurement Related Complaints and Administrative Review**
- 54.1 The procedures for making Procurement-related Complaints are as specified in the **TDS**.
- 54.2 A request for administrative review shall be made in the form provided under contract forms.

## Section II ~ Tender Data Sheet (TDS)

The following specific data shall complement, supplement, or amend the provisions in the Instructions to Tenderers (ITT). Whenever there is a conflict, the provisions herein shall prevail over those in ITT.

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
	<b>A. General</b>
ITT 1.1	Tender for Proposed Construction of Perimeter wall at Redhill Land. Tender Number: KenGenSRBS/TO15/2022
ITT 2.4	The firms that provided consulting services for the contract being tendered for are: Aegis Development Solutions Ltd.
ITT 3.1	Maximum number of members in the Joint Venture (JV) shall be. <i>N/A</i>
	<b>B. Contents of Tender Document</b>
8.1	<p>(A) Pre-Tender conference take place at the following.</p> <p>Date: 19th October 2022.</p> <p>Time: 10:30 am</p> <p>Place: Redhill Land (site)</p> <p>(B) A pre-arranged pretender visits of the site of the works.</p> <p>Date: 19th October 2022.</p> <p>Time: 11:00 am</p> <p>Place: Redhill Land (site), the land is located opposite Evas Gardens. Off Limuru Road.</p> <p>For more information and direction, you can write to us on: <a href="mailto:Amangeli@kengensrbs.co.ke">Amangeli@kengensrbs.co.ke</a> and <a href="mailto:Tenders@kengensrbs.co.ke">Tenders@kengensrbs.co.ke</a>.</p>
ITT 8.2	The Tenderer will submit any questions in writing, to reach the Scheme not later than <i>24<sup>th</sup> October 2022 at 5.00 PM.</i>
ITT 8.4	The Procuring Entity's website where Minutes of the pre-Tender meeting and the pre-arranged pretender site visit will be published. <i>N/A</i>
ITT 9.1	<p>The Tenderer will submit any request for clarifications in writing at the Address <a href="mailto:tenders@kengensrbs.co.ke">tenders@kengensrbs.co.ke</a> to reach the Scheme not later than <i>24<sup>th</sup> October 2022 at 5.00 PM.</i></p> <p>The Scheme shall respond on <i>25<sup>th</sup> October 2022 by 12.00 Noon.</i></p>
	<b>C. Preparation of Tenders</b>
ITP 13.1 (h)	<p>The Tenderer shall submit the following additional documents in its Tender:</p> <p><i>i. Business registration documents.</i></p> <p><i>ii. Current and valid tax compliance certificate.</i></p> <p><i>iii. Tender Security Kshs. 750,000.00 from a Bank, licensed by CBK.</i></p> <p><i>iv. Insurance Policies fully authorized by underwriter.</i></p> <p><i>v. Experience in construction.</i></p> <p><i>vi. NCA Certificate (NCA 5 Minimum).</i></p>
ITT 15.1	Alternative Tenders <b><i>NOT APPLICABLE</i></b>
ITT 15.2	Alternative times for completion. <b><i>Shall not be permitted.</i></b>
ITT 16.5	The prices quoted by the Tenderer shall be <i>"fixed"</i>
ITT 20.1	The Tender validity period shall be <b>121 days</b> from closing date.
ITT 21.1	<i>Tender Security shall be Kshs. 750,000.00 from a Commercial Bank licensed by Central Bank of Kenya.</i>
ITT 21.2 (d)	The other Tender Security shall be <i>N/A</i>
	<b>D. Submission and Opening of Tenders</b>

ITT Reference	PARTICULARS OF APPENDIX TO INSTRUCTIONS TO TENDERS
ITT 24.1	<p>(Trust Secretary  KenGen Staff Retirement Benefits Scheme,  Tender Box on Eleventh (11<sup>th</sup>) Floor of KenGen Pension Plaza 2,  P.O BOX 47936 – 000100,  Kolobot Road – Nairobi Kenya.</p> <p>Tenders shall <b>not submit</b> tenders electronically.</p>
ITT 27.1	<p>The deadline for Tender submission is:  Date: <b>Monday 31<sup>st</sup> October 2022</b>  Time: <b>10:30AM EAST AFRICAN TIME</b></p> <p>Tenderers <b>“SHALL NOT”</b> have the option of submitting their Tenders electronically.  The electronic Tendering submission procedures shall be: <b>NOT APPLICABLE</b></p>
ITT 27.6	<p>The form of tender and priced activity schedule shall be signed by <b>ALL</b> representatives of the Scheme Committee conducting the tender opening and all tenders shall be numbered.</p>
<b>E. Evaluation, and Comparison of Tenders</b>	
ITT 54.1	<p>The procedures for making a Procurement-related Complaint are available from the PPRA Website <a href="http://www.ppra.go.ke">www.ppra.go.ke</a> or email <a href="mailto:complaints@ppra.go.ke">complaints@ppra.go.ke</a>.</p> <p>If a Tenderer wishes to make a Procurement-related Complaint, the Tenderer should submit its complaint following these procedures, in writing (by the quickest means available, that is either by hand delivery or email to:</p> <p>Email address: <a href="mailto:info@ppra.go.ke">info@ppra.go.ke</a>.</p> <p>In summary, a Procurement-related Complaint may challenge any of the following:</p> <p>(i) the terms of the Tender Documents; and  (ii) the Procuring Entity’s decision to award the contract.</p>



## **SECTION III - EVALUATION AND QUALIFICATION CRITERIA**

### **1. General Provisions**

Wherever a Tenderer is required to state a monetary amount, Tenderers should indicate the Kenya Shilling 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 (in which the amount for that year is to be converted) was originally established.
- b) Value of single contract - Exchange rate prevailing on the date of the contract signature.
- c) Exchange rates shall be taken from the publicly available source identified in the ITT 14.3. Any error in determining the exchange rates in the Tender may be corrected by the Procuring Entity.

This section contains the criteria that the Employer shall use to evaluate tender and qualify tenderers. No other factors, methods or criteria shall be used other than specified in this tender document. The Tenderer shall provide all the information requested in the forms included in Section IV, Tendering Forms. The Scheme should use the Standard Tender Evaluation Document for Goods and Works for evaluating Tenders.

#### **Evaluation and contract award Criteria**

The Scheme shall use the criteria and methodologies listed in this Section to evaluate tenders and arrive at the Lowest Evaluated Tender. The tender that (i) meets the qualification criteria, (ii) has been determined to be substantially responsive to the Tender Documents, and (iii) is determined to have the Lowest Evaluated Tender price shall be selected for award of contract.

### **2. Preliminary examination for Determination of Responsiveness**

The Scheme will start by examining all tenders to ensure they meet in all respects the eligibility criteria and other requirements in the ITT, and that the tender is complete in all aspects in meeting the requirements of “Part 2 – Procuring Entity's Works Requirements”, including checking for tenders with unacceptable errors, abnormally low tenders, abnormally high tenders and tenders that are front loaded. The Standard Tender Evaluation Report Document for Goods and Works for evaluating Tenders provides very clear guide on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will be considered irresponsive and will not be considered further.

I. Preliminary – Mandatory				
Item No.	Requirements	Qualification Requirement	Document To be Completed	Requirements met or Not Met
1.	MUST submit Two bid documents (Original & Copy) Bid MUST be Bound and Fully Serialized.	The Tenderer shall be chronologically serializing all pages of the tender documents submitted ITT 12.1 & TDS		-
2.	Form of Tender	The Form of Tender. All blank spaces shall filled in with the information requested 12.1	Form of Tender & BoQ	-Completed without alterations to the Text -Properly filled on the tenderer's letter head and signed and stamped
3.	Nationality	Nationality in accordance with ITT 3.6	Forms ELI - 1.1 and 1.2	-Attach proof of Citizenship and Directors' shareholding. -Filled, signed, and stamped Tender Information -CR12
4.	Tax Obligations for Kenyan Tenderers	Has produced a current tax clearance certificate or tax exemption certificate issued by Kenya Revenue	TDS	-Attach Valid Tax Clearance
5.	Eligibility-Confidential Business Questionnaire	All information provided by the tendered pursuant to these requirements must be complete, current, and accurate as at the date of provision to the Procuring Entity ITT 17.7 If a tenderer fails to submit the information required by these requirements, its tender will be rejected ITT 17.8	Eligibility-Confidential Business Questionnaire	-Properly filled, signed, and Certified - Provide all required information
6.	Certificate of Independent Tender Determination	All information provided by the tenderer pursuant to these requirements must be complete, current, and accurate as at the date of provision to the Procuring Entity ITT 17.7, If a tenderer fails to submit the information required by these requirements, its tender will be rejected ITT 17.8	Certificate of Independent Tender Determination	-Properly Filled, Stamped and Signed

7.	Self-Declaration on debarment (PPAD ACT 2015)	A Tenderer that has been debarred from participating in public procurement shall be ineligible to tender or be awarded a	Form SD1	-Properly Filled, Stamped and Signed The list of debarred firms and individuals is available from the website of PPRA <a href="http://www.ppra.go.ke">www.ppra.go.ke</a> .
8.	Tender Security	<b>Kshs. 750,000.00 for a Commercial Bank licensed by CBK. Must be Valid for 121 Days</b>		-Tender Security addressed to Trust secretary.
9.	Self-Declaration on Corruption / Fraudulent Practices	A tenderer shall not be involved in corrupt, coercive, obstructive, or fraudulent practice. A tenderer that is proven to have been involved in any of these practices shall be automatically disqualified ITT 3.4 Section 62 PPAD ACT 2015	Form SD2	- Properly Filled, Stamped and Signed
10.	Declaration and Commitment to the Code of Ethics	Public Procurement & Asset Disposal Act, 2015, Regulations and the Code of Ethics for persons participating in Public Procurement and Asset Disposal and my responsibilities under the Code. Section 66PPAD ACT 2015	Form DEC 1	-Properly Filled, Stamped and Signed
11.	Bill of Quantities	Bill of Quantities shall be prepared using the relevant forms. All blank spaces shall be filled in with the information requested. The Tenderer shall chronologically serialize all pages of the tender documents submitted ITT 12.1	BOQ	- Properly Filled, Stamped and Signed -The forms must be completed without any alterations to the text and no substitutes shall be accepted. -Use Indelible Ink

12.	Registration (Incorporation and NCA)	Tenderer Shall be incorporated under the companies Act and Registration with NCA ITT 11.1(h) and preparation of Tender documents TDS C	TDS	Attach copies of original Certificate of incorporation and NCA – Building Works. (Minimum NCA level 5)
13.	Pre-tender site visit	The tenderer's designated representatives will be invited to attend a pre-arranged site visit and a pre-tender meeting. ITT 7.2	Tender notice	- Attach site visit certificate.
14.	History of Non- Performing Contracts	Non-performance of a contract did not occur as a result of contractor default since for the last 3 years.	Form CON-2	- Properly Filled, Stamped and Signed
15	On-going Contracts	Provide information on current commitments on all contracts for which a letter of intent/acceptance has been received or for contracts which full completion certificates have not/yet to be issued.	Form FIN3.4	- Properly Filled, Stamped and Signed
16.	Litigation History	No consistent history of court/arbitral award decisions against the tenderer since 1st January 2020	Form CON – 2	- Properly Filled, Stamped and Signed
17.	Financial Capabilities	The Tenderer and its parties shall provide copies of financial statements Sub-factor 3.1	Form FIN - 3.1,	- Attach Six Months Bank statement (starting April – September 2022). - Properly Filled, Stamped and Signed

18.	Average Annual Construction Turnover	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 contractor.	Form FIN - 3.2	- To be supported by Books of Accounts for period 2020 & 2021 - Properly Filled, Stamped and Signed
19.	MUST have been in Construction Business for a minimum of eight (8) years			- Attach certificate of Incorporation.

## II. Technical Requirements – Mandatory

1.	Company Profile with clear organ gram with clearly showing Key Management Staff and their short profiles.			Clear company profile with structures and Key management Staff
2.	General Construction Experience	Participation in at least Five similar contracts as a prime contractor, JV, member, sub-contractor, or management contractor.	Form EXP - 4.1	- Properly Filled, Stamped and Signed - Attach At least Five references of Building & General construction work with value not less than <b>Kshs. 10,000,000.00</b> carried out. (Attach award Letters or Contracts).
3.	Specific Construction & Contract Management Experience	Participation in at least Five similar contracts as a prime contractor.	Form EXP 4.2(a)	- Properly Filled, Stamped and Signed. - Attach At least Five references of Building construction work with value not less than <b>Kshs. 30,000,000.00</b> carried out within the last five years from 2018. (Attach award Letters or Contracts).
4.	Contractor's Representative and Key Personnel	Curriculum Vitae (CVs) of the Proposed Key Staff must be presented in the provided format and duly signed by the proposed individual. Copies of certificates and Annual Practicing Licenses for the Director (for Engineers) and Academic Certificates for all staff is mandatory; (MUST be certified)	Schedule F (Form PER. 1 and PER. 2)	
		Director of the Firm (Attach C.V and Certificates copies)	Qualifications	Degree in Civil Engineering or related (members of Engineers Board)
			Experience	Min of 8 years
		At least 1 key personnel (Attach C.V and	Qualifications	Minimum Diploma holder in Building / Engineering Construction Related Field

		Certificates	Experience	Min of 5 years		
		At least 1 Key personnel (Attach C.V and Certificates copies)	Qualification	Minimum of Artisan (trade test certificate in relevant Engineering field) – (Building, Civil, Electrical and Mechanical Engineering Construction Related Field)		
			Experience	Above 5 years		
5.	Contractors' key Equipment	<p>▢ Bidders shall declare they have possession/Ownership of various equipment as proposed to be used in the Project by providing Logbooks that demonstrate proof of ownership</p> <p>▢ For Bidders planning to hire, they shall provide an Active Lease Agreement in Place that can be used during the Project Life. The copy of logbooks of the lessor(s) shall also be provided.</p>				
6.	Detailed Information on Key Equipment	Main Scope of Works of this Tender	Main Equipment	Quantity (No) (Minimum)		
			Lorries		Owned	Hired/ leased
			Relevant Tools and Equipment			
			Concrete Mixer			
			Any other tools			
7.	Proposed methodology	<p>a. technical approach and methodology</p> <ul style="list-style-type: none"> <li>- Provided a detailed Work Methodology</li> <li>- Provide a Methodology on safety during the construction period</li> <li>- Provide a specific Quality management plan</li> </ul> <p>b) Work plan/ Program of Works (PoW)</p> <ul style="list-style-type: none"> <li>- PoW Resourced with Equipment- Min. allocation pursuant to the Schedule E of Technical Proposal</li> <li>- PoW captures Monthly outputs for each activity</li> </ul> <p>c) Site Organization and staffing (Schedule B of Technical proposal)</p>				

3. **Tender Evaluation (ITT 35) Price evaluation:** in addition to the criteria listed in ITT 35.2 (a) – (c) the following criteria shall apply: Not permitted.

i) **Alternative Completion Times**, if permitted under ITT 13.2, will be evaluated as follows:

.....

ii) **Alternative Technical Solutions** for specified parts of the Works, if permitted under ITT 13.4, will be evaluated as follows: .....

iii) **Other Criteria**; if permitted under ITT 35.2(d):

.....

4. **Multiple Contracts – Not applicable**

Multiple contracts will be permitted in accordance with ITT 35.4. Tenderers are evaluated on basis of Lots and the lowest evaluated tenderer identified for each Lot. The Scheme will select one Option of the two Options listed below for award of Contracts.

**OPTION 1**

- i) If a tenderer wins only one Lot, the tenderer will be awarded a contract for that Lot, provided the tenderer meets the Eligibility and Qualification Criteria for that Lot.
- ii) If a tenderer wins more than one Lot, the tender will be awarded contracts for all won Lots, provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the Lots. The tenderer will be awarded the combination of Lots for which the tenderer qualifies and the others will be considered for award to second lowest the tenderers.

**OPTION 2**

The Scheme will consider all possible combinations of won Lots [contract(s)] and determine the combinations with the lowest evaluated price. Tenders will then be awarded to the Tenderer or Tenderers in the combinations provided the tenderer meets the aggregate Eligibility and Qualification Criteria for all the won Lots.

5. **Alternative Tenders (ITT 13.1) – Not applicable**

*An alternative if permitted under ITT 13.1, will be evaluated as follows:*

The Scheme shall consider Tenders offered for alternatives as specified in Part 2- Works Requirements. Only the technical alternatives, if any, of the Tenderer with the Best Evaluated Tender conforming to the basic technical requirements shall be considered by the Procuring Entity.

6. **Margin of Preference - Not applicable.**

7. **Post qualification and Contract award (ITT 39), more specifically,**

- a) In case the tender was subject to post-qualification, the contract shall be awarded to the lowest evaluated tenderer, subject to confirmation of pre-qualification data, if so required.
- b) In case the tender was not subject to post-qualification, the tender that has been determined to be the lowest evaluated tenderer shall be considered for contract award, subject to meeting each of the following conditions.
- i) The Tenderer 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 of Kenya Shillings 25,000,000.00.
- ii) Minimum average annual construction turnover of Kenya Shillings 50,000,000.00 equivalent calculated as total certified payments received for contracts in progress and/or completed within the last 2 years.
- iii) At least five of contract(s) of a similar nature executed within Kenya, or the East African Community or abroad, that have been satisfactorily and substantially completed as a prime contractor, or joint venture member or sub-contractor each of minimum value Kenya shillings 8.5 million equivalent.

- iv) Contractor's Representative and Key Personnel, which are specified.
- v) Contractors key equipment listed on the table "Contractor's Equipment" below and more specifically listed as *evaluation requirements*.
  - a) **History of non-performing contracts:**  
Tenderer and each member of JV in case the Tenderer is a JV, shall demonstrate that non-performance of a contract did not occur because of the default of the Tenderer, or the member of a JV in the last three years (*specify years*). The required information shall be furnished in the appropriate form.
  - b) **Pending Litigation**  
Financial position and prospective long-term profitability of the Single Tenderer, and in the case the Tenderer is a JV, of each member of the JV, shall remain sound according to criteria established with respect to Financial Capability under Paragraph (i) above if all pending litigation will be resolved against the Tenderer. Tenderer shall provide information on pending litigations in the appropriate form.
  - c) **Litigation History**  
There shall be no consistent history of court/arbitral award decisions against the Tenderer, in the last five *years*. All parties to the contract shall furnish the information in the appropriate form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the years specified. A consistent history of awards against the Tenderer or any member of a JV may result in rejection of the tender.



## QUALIFICATION FORMS

### 1. FORMEQU: EQUIPMENT

The Tenderer 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 Tenderer.

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

Omit the following information for equipment owned by the Tenderer.

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	

## 2. FORM PER -1

### Contractor's Representative and Key Personnel Schedule

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

### Contractor' Representative and Key Personnel

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

### 3. **FORM PER-2:**

Resume and Declaration - Contractor's Representative and Key Personnel.

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

<b>Name of Tenderer</b>		
Position [# 1]: <i>[title of position from Form PER-1]</i>		
Personnel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: <i>[language and levels of speaking, reading and writing skills]</i>	
Details	Address of Procuring Entity:	
	Telephone:	Contact (manager / personnel officer):
	Fax:	
	Job title:	Years with present Procuring Entity:

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

Project	Role	Duration of involvement	Relevant experience
<i>[main project details]</i>	<i>[role and responsibilities on the project]</i>	<i>[time in role]</i>	<i>[describe the experience relevant to this position]</i>

## Declaration

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

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

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

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

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

Name of Contractor's Representative or Key Personnel: *[insert name]*

Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_ Countersignature

of authorized representative of the Tenderer:

Signature: \_\_\_\_\_ Date: (day month

year): \_\_\_\_\_

#### 4. TENDERER'S QUALIFICATION WITHOUT PRE-QUALIFICATION

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

##### 4.1 FORM ELI ~1.1

###### Tenderer Information Form

Date: \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

Tenderer's name
In case of Joint Venture (JV), name of each member:
Tenderer's actual or intended country of registration: <i>/indicate country of Constitution/</i>
Tenderer's actual or intended year of incorporation:
Tenderer's legal address [in country of registration]:
Tenderer's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITT 3.6 <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITT 3.5 <input type="checkbox"/> In case of state-owned enterprise or institution, in accordance with ITT 3.8, documents establishing: <ul style="list-style-type: none"><li>• Legal and financial autonomy</li><li>• Operation under commercial law</li><li>• Establishing that the Tenderer is not under the supervision of the Procuring Entity</li></ul>
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

#### 4.2 FORM ELI ~1.2

##### **Tenderer's JV Information Form**

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

Date: \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

Tenderer's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
<p>1. Attached are copies of original documents of</p> <p><input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITT 3.6.</p> <p><input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Procuring Entity, in accordance with ITT 3.8.</p> <p>2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.</p>

### 4.3 FORM CON – 2

#### Historical Contract Non-Performance, Pending Litigation and Litigation History

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name: \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

##### Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria

☐ Contract non-performance did not occur since 1<sup>st</sup> January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1.

☐ Contract(s) not performed since 1<sup>st</sup> January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, requirement 2.1

Year	Non- performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and Kenya Shilling equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Procuring Entity: <i>[insert full name]</i> Address of Procuring Entity: <i>[insert street/city/country]</i> Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>

##### Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria

☐ No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3.

☐ Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below.

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)
		Contract Identification: _____ Name of Procuring Entity: _____ Address of Procuring Entity: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	
		Contract Identification: _____ Name of Procuring Entity: _____ Address of Procuring Entity: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	

##### Litigation History in accordance with Section III, Evaluation and Qualification Criteria

☐ No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4.

☐ Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.

Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), Kenya Shilling Equivalent (exchange rate)

<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: <i>[indicate complete contract name, number, and any other identification]</i> Name of Procuring Entity: <i>[insert full name]</i> Address of Procuring Entity: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate “Procuring Entity” or “Contractor”]</i> Reason(s) for Litigation and award decision <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
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#### 4.4 FORM FIN – 3.1:

##### Financial Situation and Performance

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

##### 4.4.1. Financial Data

Type of Financial information in _____ (currency)	Historic information for previous _____ years, _____ (amount in currency, currency, exchange rate*, USD equivalent)				
	Year 1	Year 2	Year 3	Year 4	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					

\*Refer to ITT 15 for the exchange rate

#### 4.4.2 Sources of Finance

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

No.	Source of finance	Amount (Kenya Shilling equivalent)
1		
2		
3		

#### 4.4.3 Financial documents

The Tenderer and its parties shall provide copies of financial statements for \_\_\_\_\_ years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

- (a) reflect the financial situation of the Tenderer or in case of JV 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<sup>1</sup> for the \_\_\_\_\_ years required above; and complying with the requirements

---

<sup>1</sup> If the most recent set of financial statements is for a period earlier than 12 months from the date of Tender, the reason for this should be justified.

**4.5 FORM FIN – 3.2:**

**Average Annual Construction Turnover**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

		Annual turnover data (construction only)	
Year	Amount Currency	Exchange rate	Kenya Shilling equivalent
<i>[indicate year]</i>	<i>[insert amount and indicate currency]</i>		
Average Annual Construction Turnover *			

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

#### 4.6 FORM FIN – 3.3:

##### **Financial Resources**

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

<b>Financial Resources</b>		
<b>No.</b>	<b>Source of financing</b>	<b>Amount (Kenya Shilling equivalent)</b>
1		
2		
3		

**1.7 FORM FIN – 3.4:****Current Contract Commitments / Works in Progress**

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

Current Contract Commitments					
	Name of Contract	Procuring Entity's Contact Address, Tel,	Value of Outstanding Work [Current Kenya Shilling /month Equivalent]	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [Kenya Shilling /month)]
1					
2					
3					
4					
5					

## General Construction Experience

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_ pages

Starting Year	Ending Year	Contract Identification	Role of Tenderer
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Tenderer: _____ Amount of contract: _____ Name of Procuring Entity: _____ Address: _____	

**General Specific Construction and Contract Management Experience**

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

JV Member's Name \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

<b>Similar Contract No.</b>	<b>Information</b>			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	<b>Kenya Shilling</b>			
If member in a JV or sub-contractor, specify participation in total Contract amount				
Procuring Entity's Name:				
Address:				
Telephone/fax number				
E-mail:				



#### 4.10 FORM EXP - 4.2 (a) (cont.)

##### Specific Construction and Contract Management Experience (cont.)

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

## Construction Experience in Key Activities

Tenderer's Name: \_\_\_\_\_

Date: \_\_\_\_\_

Tenderer's JV Member Name: \_\_\_\_\_

Sub-contractor's Name<sup>2</sup> (as per ITT 34): \_\_\_\_\_

ITT No. and title: \_\_\_\_\_

All Sub-contractors for key activities must complete the information in this form as per ITT 34 and Section III, Evaluation and Qualification Criteria, Sub-Factor 4.2.

1. Key Activity No One: \_

Information				
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	Kenya Shilling			
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)	Actual Quantity Performed (i) x (ii)	
Year 1				
Year 2				
Year 3				
Year 4				
Procuring Entity's Name:				
Address: Telephone/fax number E-mail:				

<sup>2</sup> If applicable

	Information
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	

2. Activity No. Two

3. ....

## **OTHER FORMS**

### **5. FORM OF TENDER**

#### ***INSTRUCTIONS TO TENDERERS***

- i) *The Tenderer must prepare this Form of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.*
- ii) *All italicized text is to help Tenderer in preparing this form.*
- iii) *Tenderer must complete and sign CERTIFICATE OF INDEPENDENT TENDER DETERMINATION and the SELF DECLARATION OF THE TENDERER attached to this Form of Tender.*
- iv) *The Form of Tender shall include the following Forms duly completed and signed by the Tenderer:*
  - *Tenderer's Eligibility- Confidential Business Questionnaire*
  - *Certificate of Independent Tender Determination*
  - *Self-Declaration of the Tenderer*

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

**Request for Tender No.:** *[insert identification]*

**Name and description of Tender** *[Insert as per ITT]*

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

**To:** *[insert complete name of Procuring Entity]* Dear Sirs,

1. In accordance with the Conditions of Contract, Specifications, Drawings and Bills of Quantities for the execution of the above-named Works, we, the undersigned offer to construct and complete the Works and remedy any defects therein for the sum of Kenya Shillings *[Amount in figures]* \_\_\_\_\_ Kenya Shillings *[amount in words]* \_\_\_\_\_.

The above amount includes foreign currency amount (s) of *[state figure or a percentage and currency]* *[figures]* \_\_\_\_\_ *[words]* \_\_\_\_\_.

The percentage or amount quoted above does not include provisional sums, and only allows not more than two foreign currencies.

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Project Manager's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Special Conditions of Contract.
3. We agree to adhere by this tender until **121 days**, and it shall remain binding upon us and may be accepted at any time before that date.
4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us. We further understand that you are not bound to accept the lowest or any tender you may receive.
5. We, the undersigned, further declare that:
  - i) No reservations: We have examined and have no reservations to the tender document, including Addenda issued in accordance with ITT 28;
  - ii) Eligibility: We meet the eligibility requirements and have no conflict of interest in accordance with ITT 3 and 4;
  - iii) Tender-Securing Declaration: We have not been suspended nor declared ineligible by the Scheme based on execution of a Tender-Securing or Proposal-Securing Declaration in the Procuring Entity's Country in accordance with ITT 19.8;
  - iv) Conformity: We offer to execute in conformity with the tendering documents and in accordance with the implementation and completion specified in the construction schedule, the following Works: *[insert a brief description of the Works]*;

- v) Tender Price: The total price of our Tender, excluding any discounts offered in item 1 above is: *[Insert one of the options below as appropriate]*
- vi) Option 1, in case of one lot: Total price is: *[insert the total price of the Tender in words and figures, indicating the various amounts and the respective currencies]*; Or
- Option 2, in case of multiple lots:
- a) Total price of each lot *[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies]*; and
- b) Total price of all lots (sum of all lots) *[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies]*;
- vii) Discounts: The discounts offered and the methodology for their application are:
- viii) The discounts offered are: *[Specify in detail each discount offered.]*
- ix) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts]*;
- x) Tender Validity Period: Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- xi) Performance Security: If our Tender is accepted, we commit to obtain a Performance Security in accordance with the Tendering document;
- xii) One Tender Per Tender: We are not submitting any other Tender(s) as an individual Tender, and we are not participating in any other Tender(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITT 3.4, other than alternative Tenders submitted in accordance with ITT 13.3;
- xiii) Suspension and Debarment: We, along with any of our subcontractors, suppliers, Project Manager, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Public Procurement Regulatory Authority or any other entity of the Government of Kenya, or any international organization.
- xiv) State-owned enterprise or institution: *[select the appropriate option and delete the other]* *[We are not a state-owned enterprise or institution]* / *[We are a state-owned enterprise or institution but meet the requirements of ITT 3.8]*;
- xv) Commissions, gratuities, fees: We have paid, or will pay the following commissions, gratuities, or fees with respect to the tender process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*.

Name of Recipient	Address	Reason	Amount

*(If none has been paid or is to be paid, indicate “none.”)*

- xvi) Binding Contract: We understand that this Tender, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- xvii) Not Bound to Accept: We understand that you are not bound to accept the lowest evaluated cost Tender, the Most Advantageous Tender or any other Tender that you may receive;
- xviii) Fraud and Corruption: We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption;

- xix) Collusive practices: We hereby certify and confirm that the tender is genuine, non-collusive and made with the intention of accepting the contract if awarded. To this effect we have signed the “Certificate of Independent Tender Determination” attached below.
- xx) We undertake to adhere by the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal, copy available from \_\_\_\_\_ (*specify website*) during the procurement process and the execution of any resulting contract.
- xxi) We, the Tenderer, have completed fully and signed the following Forms as part of our Tender:
- Tenderer's Eligibility: Confidential Business Questionnaire – to establish we are not in any conflict to interest.
  - Certificate of Independent Tender Determination – to declare that we completed the tender without colluding with other tenderers.
  - Self-Declaration of the Tenderer – to declare that we will, if awarded a contract, not engage in any form of fraud and corruption.
  - Declaration and commitment to the Code of Ethics for Persons Participating in Public Procurement and Asset Disposal

Further, we confirm that we have read and understood the full content and scope of fraud and corruption as informed in “**Appendix 1- Fraud and Corruption**” attached to the Form of Tender.

**Name of the Tenderer:** \*[insert complete name of person signing the Tender]

**Name of the person duly authorized to sign the Tender on behalf of the Tenderer:** \*\*[insert complete name of person duly authorized to sign the Tender]

**Title of the person signing the Tender:** [insert complete title of the person signing the Tender]

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

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

Date signed \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

#### **Notes**

\* In the case of the Tender submitted by joint venture specify the name of the Joint Venture as Tenderer

\*\* Person signing the Tender shall have the power of attorney given by the Tenderer to be attached with the Tender.

## A. TENDERER'S ELIGIBILITY- CONFIDENTIAL BUSINESS QUESTIONNAIRE

### Instruction to Tenderer

Tender is instructed to complete the particulars required in this Form, *one form for each entity if Tender is a JV*. Tenderer is further reminded that it is an offence to give false information on this Form.

#### (a) Tenderer's details

	ITEM	DESCRIPTION
1	Name of the Procuring Entity	
2	Reference Number of the Tender	
3	Date and Time of Tender Opening	
4	Name of the Tenderer	
5	Full Address and Contact Details of the Tenderer.	1. Country 2. City 3. Location 4. Building 5. Floor 6. Postal Address 7. Name and email of contact person.
6	Current Trade License Registration Number and Expiring date	
7	Name, country and full address ( <i>postal and physical addresses, email, and telephone number</i> ) of Registering Body/Agency	
8	Description of Nature of Business	
9	Maximum value of business which the Tenderer handles.	
10	State if Tenders Company is listed in stock exchange, give name and full address ( <i>postal and physical addresses, email, and telephone number</i> ) of state which stock exchange	

### General and Specific Details

#### b) Sole Proprietor, provide the following details.

Name in full \_\_\_\_\_ Age \_\_\_\_\_ Nationality \_\_\_\_\_  
Country of Origin \_\_\_\_\_ Citizenship \_\_\_\_\_

#### c) Partnership, provide the following details.

	Names of Partners	Nationality	Citizenship	% Shares owned
1				
2				
3				

#### d) Registered Company, provide the following details.

i) Private or public Company \_\_\_\_\_

ii) State the nominal and issued capital of the Company \_\_\_\_\_

Nominal Kenya Shillings (Equivalent) ..... Issued

Kenya Shillings (Equivalent) .....

iii) Give details of Directors as follows.



	Names of Director	Nationality	Citizenship	% Shares owned
1				
2				
3				

**(e) DISCLOSURE OF INTEREST- Interest of the Firm in the Procuring Entity.**

- i) Are there any person/persons in ..... (*Name of Procuring Entity*) who has/have an interest or relationship in this firm? Yes/No.....

If yes, provide details as follows.

	Names of Person	Designation in the Procuring Entity	Interest or Relationship with Tenderer
1			
2			
3			

**ii) Conflict of interest disclosure**

	Type of Conflict	Disclosure YES OR NO	If YES provide details of the relationship with Tenderer
1	Tenderer is directly or indirectly controls, is controlled by or is under common control with another tenderer.		
2	Tenderer receives or has received any direct or indirect subsidy from another tenderer.		
3	Tenderer has the same legal representative as another tenderer		
4	Tender has a relationship with another tenderer, directly or through common third parties, that puts it in a position to influence the tender of another tenderer or influence the decisions of the Scheme regarding this tendering process.		
5	Any of the Tenderer's affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the tender.		
6	Tenderer would be providing goods, works, non-consulting services or consulting services during implementation of the contract specified in this Tender Document.		
7	Tenderer has a close business or family relationship with a professional staff of the Scheme who are directly or indirectly involved in the preparation of the Tender document or specifications of the Contract, and/or the Tender evaluation process of such contract.		
8	Tenderer has a close business or family relationship with a professional staff of the Scheme who would be involved in the implementation or supervision of such Contract.		
9	Has the conflict stemming from such relationship stated in item 7 and 8 above been resolved in a manner acceptable to the Scheme throughout the tendering process and execution of the Contract.		

**f) Certification**

On behalf of the Tenderer, I certify that the information given above is complete, current and accurate as at the date of submission.

Full Name \_\_\_\_\_ Title or

Designation \_\_\_\_\_

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

## B. CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting the accompanying Letter of Tender to the \_\_\_\_\_ [Name of Procuring Entity] for: \_\_\_\_\_ [Name and number of tenders] in response to the request for tenders made by: \_\_\_\_\_ [Name of Tenderer] do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of \_\_\_\_\_ [Name of Tenderer] that:

1. I have read and I understand the contents of this Certificate;
2. I understand that the Tender will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am the authorized representative of the Tenderer with authority to sign this Certificate, and to submit the Tender on behalf of the Tenderer;
4. For the purposes of this Certificate and the Tender, I understand that the word "competitor" shall include any individual or organization, other than the Tenderer, whether or not affiliated with the Tenderer, who:
  - a) has been requested to submit a Tender in response to this request for tenders;
  - b) could potentially submit a tender in response to this request for tenders, based on their qualifications, abilities or experience;
5. The Tenderer discloses that [check one of the following, as applicable]:
  - a) The Tenderer has arrived at the Tender independently from, and without consultation, communication, agreement or arrangement with, any competitor;
  - b) the Tenderer has entered into consultations, communications, agreements or arrangements with one or more competitors regarding this request for tenders, and the Tenderer discloses, in the attached document(s), complete details thereof, including the names of the competitors and the nature of, and reasons for, such consultations, communications, agreements or arrangements;
6. In particular, without limiting the generality of paragraphs (5) (a) or (5) (b) above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - a) prices;
  - b) methods, factors or formulas used to calculate prices;
  - c) the intention or decision to submit, or not to submit, a tender; or
  - d) the submission of a tender which does not meet the specifications of the request for Tenders; except as specifically disclosed pursuant to paragraph (5) (b) above;
7. In addition, there has been no consultation, communication, agreement or arrangement with any competitor regarding the quality, quantity, specifications or delivery particulars of the works or services to which this request for tenders relates, except as specifically authorized by the procuring authority or as specifically disclosed pursuant to paragraph (5) (b) above;
8. the terms of the Tender have not been, and will not be, knowingly disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening, or of the awarding of the Contract, whichever comes first, unless otherwise required by law or as specifically disclosed pursuant to paragraph (5) (b) above.

Name \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

*[Name, title and signature of authorized agent of Tenderer and Date].*

**C. SELF ~ DECLARATION FORMS**

**FORM SD1**

**SELF DECLARATION THAT THE PERSON/TENDERER IS NOT DEBARRED IN THE MATTER OF THE PUBLIC PROCUREMENT AND ASSET DISPOSAL ACT 2015.**

I, ....., of Post Office Box ..... being a resident of ..... in the Republic of ..... do hereby make a statement as follows: -

1. THAT I am the Company Secretary/ Chief Executive/Managing Director/Principal Officer/Director of ..... (*insert name of the Company*) who is a Bidder in respect of Tender No. .... for ..... (*insert tender title/description*) for ..... (*insert name of the Procuring entity*) and duly authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its Directors and subcontractors have not been debarred from participating in procurement proceeding under Part IV of the Act.
3. THAT what is deposed to herein above is true to the best of my knowledge, information and belief.

..... (Title)  
..... (Signature) ..... (Date)

Bidder Official Stamp

## FORM SD2

### SELF DECLARATION THAT THE PERSON/TENDERER WILL NOT ENGAGE IN ANY CORRUPT OR FRAUDULENT PRACTICE

I, ..... of P. O. Box ..... being a resident of ..... in the Republic of ..... do hereby make a statement as follows: -

1. THAT I am the Chief Executive/Managing Director/Principal Officer/Director of ..... (*insert name of the Company*) who is a Bidder in respect of Tender No. .... for ..... (*insert tender title/description*) for ..... (*insert name of the Procuring entity*) and duly authorized and competent to make this statement.
2. THAT the aforesaid Bidder, its servants and/or agents /subcontractors will not engage in any corrupt or fraudulent practice and has not been requested to pay any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ..... (*insert name of the Procuring entity*) which is the procuring entity.
3. THAT the aforesaid Bidder, its servants and/or agents /subcontractors have not offered any inducement to any member of the Board, Management, Staff and/or employees and/or agents of ..... (name of the procuring entity)
4. THAT the aforesaid Bidder will not engage /has not engaged in any corrosive practice with other bidders participating in the subject tender
5. THAT what is deponed to herein above is true to the best of my knowledge information and belief.

.....  
(Title)

.....  
(Signature)

.....  
(Date)

Bidder's Official Stamp

## DECLARATION AND COMMITMENT TO THE CODE OF ETHICS

I ..... (person) on behalf of (*Name of the Business/ Company/Firm*) ..... declare that I have read and fully understood the contents of the Public Procurement & Asset Disposal Act, 2015, Regulations and the Code of Ethics for persons participating in Public Procurement and Asset Disposal and my responsibilities under the Code.

I do hereby commit to abide by the provisions of the Code of Ethics for persons participating in Public Procurement and Asset Disposal.

Name of Authorized signatory ..... Sign .....

Position .....

Office address ..... Telephone .....

E-mail .....

Name of the Firm/Company .....

Date ..... (Company Seal/ Rubber

Stamp where applicable)

Witness

Name ..... Sign .....

Date .....

## D. APPENDIX 1- FRAUD AND CORRUPTION

*(Appendix 1 shall not be modified)*

### 1. Purpose

2. The Government of Kenya's Anti-Corruption and Economic Crime laws and their sanction's policies and procedures, Public Procurement and Asset Disposal Act (*no. 33 of 2015*) and its Regulation, and any other Kenya's Acts or Regulations related to Fraud and Corruption, and similar offences, shall apply with respect to Public Procurement Processes and Contracts that are governed by the laws of Kenya.

### 3. Requirements

The Government of Kenya requires that all parties including Procuring Entities, Tenderers, (applicants/proposers), Consultants, Contractors and Suppliers; any Sub-contractors, Sub-consultants, Service providers or Suppliers; any Agents (whether declared or not); and any of their Personnel, involved and engaged in procurement under Kenya's Laws and Regulation, observe the highest standard of ethics during the procurement process, selection and contract execution of all contracts, and refrain from Fraud and Corruption and fully comply with Kenya's laws and Regulations as per paragraphs 1.1 above.

Kenya's public procurement and asset disposal act (*no. 33 of 2015*) under Section 66 describes rules to be followed and actions to be taken in dealing with Corrupt, Coercive, Obstructive, Collusive or Fraudulent practices, and Conflicts of Interest in procurement including consequences for offences committed. A few of the provisions noted below highlight Kenya's policy of no tolerance for such practices and behavior: -

- 1) a person to whom this Act applies shall not be involved in any corrupt, coercive, obstructive, collusive or fraudulent practice; or conflicts of interest in any procurement or asset disposal proceeding;
- 2) A person referred to under subsection (1) who contravenes the provisions of that sub-section commits an offence;
- 3) Without limiting the generality of the subsection (1) and (2), the person shall be: -
  - a) disqualified from entering into a contract for a procurement or asset disposal proceeding; or
  - b) if a contract has already been entered into with the person, the contract shall be voidable;
- 4) The voiding of a contract by the Scheme under subsection (7) does not limit any legal remedy the Scheme may have;
- 5) An employee or agent of the Scheme or a member of the Board or committee of the Scheme who has a conflict of interest with respect to a procurement: -
  - a) shall not take part in the procurement proceedings;
  - b) shall not, after a procurement contract has been entered into, take part in any decision relating to the procurement or contract; and
- c) shall not be a subcontractor for the bidder to whom was awarded contract, or a member of the group of bidders to whom the contract was awarded, but the subcontractor appointed shall meet all the requirements of this Act.
- 6) An employee, agent or member described in subsection (1) who refrains from doing anything prohibited under that subsection, but for that subsection, would have been within his or her duties shall disclose the conflict of interest to the procuring entity;
- 7) If a person contravenes subsection (1) with respect to a conflict of interest described in subsection (5)(a) and the contract is awarded to the person or his relative or to another person in whom one of them had a direct or indirect pecuniary interest, the contract shall be terminated, and all costs incurred by the public entity shall be made good by the awarding officer. Etc.

In compliance with Kenya's laws, regulations and policies mentioned above, the Procuring Entity:

- a) Defines broadly, for the purposes of the above provisions, the terms set forth below as follows:
  - i) "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
  - ii) "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;

- iii) “Collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
  - 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:
    - deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede investigation by Public Procurement Regulatory Authority (PPRA) or any other appropriate authority appointed by Government of Kenya 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
    - acts intended to materially impede the exercise of the PPRA’s, or the appointed authority's inspection and audit rights provided for under paragraph 2.3 e. below.
- b) Defines more specifically, in accordance with the above procurement Act provisions set forth for fraudulent and collusive practices as follows:
- "Fraudulent practice" includes a misrepresentation of fact in order to influence a procurement or disposal process or the exercise of a contract to the detriment of the Scheme or the tenderer or the contractor, and includes collusive practices amongst tenderers prior to or after tender submission designed to establish tender prices at artificial non-competitive levels and to deprive the Scheme of the benefits of free and open competition.
- c) Rejects a proposal for award<sup>1</sup> of a contract if PPRA determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
  - d) Pursuant to the Kenya's above stated Acts and Regulations, may sanction or recommend to appropriate authority (ies) for sanctioning and debarment of a firm or individual, as applicable under the Acts and Regulations;
  - e) Requires that a clause be included in Tender documents and Request for Proposal documents requiring (i) Tenderers (applicants/proposers), Consultants, Contractors, and Suppliers, and their Sub-contractors, Sub-consultants, Service providers, Suppliers, Agents personnel, permit the PPRA or any other appropriate authority appointed by Government of Kenya to inspect<sup>2</sup> all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the PPRA or any other appropriate authority appointed by Government of Kenya; and
  - f) Pursuant to Section 62 of the above Act, requires Applicants/Tenderers to submit along with their Applications/Tenders/Proposals a “Self-Declaration Form” as included in the procurement document declaring that they and all parties involved in the procurement process and contract execution have not engaged/ will not engage in any corrupt or fraudulent practices.

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<sup>1</sup> For the avoidance of doubt, a party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and tendering, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

<sup>2</sup> Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Investigating Authority or persons appointed by the Scheme to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.



**FORM OF TENDER SECURITY-[Option 1–Demand Bank Guarantee]**

**Beneficiary:**\_\_\_\_\_

**Request for Tenders No:**

\_\_\_\_\_  
**Date:**\_\_\_\_\_

**TENDER GUARANTEE No.:**\_\_\_\_\_

**Guarantor:**\_\_\_\_\_

1. We have been informed that \_\_\_\_\_ (here in after called "the Applicant") has submitted or will submit to the Beneficiary its Tender (here in after called" the Tender") for the execution of \_\_\_\_\_ under Request for Tenders No. \_\_\_\_\_ ("the ITT").
2. Furthermore, we understand that, according to the Beneficiary's conditions, Tenders must be supported by a Tender guarantee.
3. At the request of the Applicant, 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 complying 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 Applicant:
  - (a) has withdrawn its Tender during the period of Tender validity set forth in the Applicant's Letter of Tender ("the Tender Validity Period"), or any extension thereto provided by the Applicant; or
  - b) having been notified of the acceptance of its Tender by the Beneficiary during the Tender Validity Period or any extension there to provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance.
4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) thirty days after the end of the Tender Validity Period.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

\_\_\_\_\_  
*[signature(s)]*

***Note: All italicized text is for use in preparing this form and shall be deleted from the final product.***

**FORMAT OF TENDER SECURITY [Option 2–Insurance Guarantee]**

**TENDER GUARANTEE No.:** \_\_\_\_\_

1. Whereas ..... [*Name of the tenderer*] (hereinafter called “the tenderer”) has submitted its tender dated ..... [*Date of submission of tender*] for the ..... [*Name and/or description of the tender*] (hereinafter called “the Tender”) for the execution of\_\_under Request for Tenders No.\_\_\_\_\_(“the ITT”).
2. KNOW ALL PEOPLE by these presents that WE ..... of ..... [**Name of Insurance Company**] having our registered office at ..... (hereinafter called “the Guarantor”), are bound unto ..... [*Name of Procuring Entity*] (hereinafter called “the Procuring Entity”) in the sum of ..... (Currency and guarantee amount) for which payment well and truly to be made to the said Procuring Entity, the Guarantor binds itself, its successors and assigns, jointly and severally, firmly by these presents.

Sealed with the Common Seal of the said Guarantor this \_\_\_\_day of \_\_\_\_\_ 20 \_\_\_\_.

3. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Applicant:
  - a) has withdrawn its Tender during the period of Tender validity set forth in the Principal's Letter of Tender (“the Tender Validity Period”), or any extension thereto provided by the Principal; or
  - b) having been notified of the acceptance of its Tender by the Procuring Entity during the Tender Validity Period or any extension thereto provided by the Principal; (i) failed to execute the Contract agreement; or (ii) has failed to furnish the Performance Security, in accordance with the Instructions to tenderers (“ITT”) of the Procuring Entity's Tendering document.

then the guarantee undertakes to immediately pay to the Procuring Entity up to the above amount upon receipt of the Procuring Entity's first written demand, without the Procuring Entity having to substantiate its demand, provided that in its demand the Procuring Entity shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

4. This guarantee will expire: (a) if the Applicant is the successful Tenderer, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, or (b) if the Applicant is not the successful Tenderer, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Tendering process; or (ii) twenty-eight days after the end of the Tender Validity Period.
5. Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

\_\_\_\_\_  
[Date]

\_\_\_\_\_  
[Witness]

\_\_\_\_\_  
[Signature of the Guarantor]

\_\_\_\_\_  
[Seal]

***Note: All italicized text is for use in preparing this form and shall be deleted from the final product.***

## TENDER-SECURING DECLARATION FORM

*[The Bidder shall complete this Form in accordance with the instructions indicated]*

Date:.....*[insert date (as day, month and year) of Tender Submission]*

Tender No.:.....*[insert number of tendering process]*

To:..... *[insert complete name of Purchaser]* I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Tender-Securing Declaration.
2. I/We accept that I/we will automatically be suspended from being eligible for tendering in any contract with the Purchaser for the period of time of [insert number of months or years] starting on [insert date], if we are in breach of our obligation(s) under the bid conditions, because we – (a) have withdrawn our tender during the period of tender validity specified by us in the Tendering Data Sheet; or (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the instructions to tenders.
3. I/We understand that this Tender Securing Declaration shall expire if we are not the successful Tenderer(s), upon the earlier of:
  - a) our receipt of a copy of your notification of the name of the successful Tenderer; or
  - b) thirty days after the expiration of our Tender.
4. I/We understand that if I am/we are/in a Joint Venture, the Tender Securing Declaration must be in the name of the Joint Venture that submits the bid, and the Joint Venture has not been legally constituted at the time of bidding, the Tender Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed:..... Capacity / title (director

or partner or sole proprietor, etc.) ..... Name:

..... Duly authorized to sign the bid

for and on behalf of: *[insert complete name of Tenderer]*

Dated on ..... day of ..... *[Insert date of signing]* Seal or stamp

## Appendix to Tender

### Schedule of Currency requirements

Summary of currencies of the Tender for \_\_\_\_\_ *[insert name of Section of the Works]*

<b><i>Name of currency</i></b>	<b><i>Amounts payable</i></b>
Local currency: _____	
Foreign currency #1: _____	
Foreign currency #2: _____	
Foreign currency #3: _____	
Provisional sums expressed in local currency _____	[To be entered by the Procuring Entity]

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## **PART II ~ WORK REQUIREMENTS**

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PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	Kshs.	Cts
A	<p><b>PRICING ITEMS OF PRELIMINARIES</b></p> <p>Preliminaries to the contract are mandatory conditions and responsibilities the contractor is required to fulfill for the complete and proper execution of the contract. The contractor is advised to read and understand all his obligations under preliminary. Should he find fulfillment of any of the items will lead to him incurring any cost not covered under measured works he shall price such works accordingly otherwise failure to price any item will be construed to mean that the tenderer has included it in other priced items of the bill of quantities. Prices <b>SHALL BE INSERTED</b> against items of "preliminaries" in the tenderer's priced Bills of Quantities.</p>		
B	<p><b>DESCRIPTION OF THE WORKS</b></p> <p>The works to be carried out under this contract involves the <b>CONSTRUCTION OF A MASONRY PERIMETER WALL, GATE HOUSE AND A GATE IN REDHILL LIMURU FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME. APPROXIMATE LENGTH IS 1750 METRES</b></p>		
C	<p><b>MEASUREMENTS</b></p> <p>In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract documents shall immediately be referred to the PROJECT MANAGER in accordance with Clause 22 of the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 22 of the said Conditions.</p>		
D	<p><b>LOCATION OF SITE</b></p> <p>The site is located in <b>KIAMBU COUNTY, REDHILL ALONG LIMURU ROAD</b> The Contractor is advised to visit all the sites, to familiarize with the nature and position of the site. No claims arising from the Contractor's failure to do so will be entertained.</p>		
	Carried to Collection		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

Item	DESCRIPTION	Kshs.	Cts
A	<p><b>CLEARING AWAY</b></p> <p>The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate and upon completion of the works, remove and clear away all plant, equipment, rubbish, unused materials and stains and leave in a clean and tidy state to the reasonable satisfaction of the Project Manager.</p>		
B	<p>The whole of the works shall be delivered up clean, complete and in perfect condition in every respect to the satisfaction of the Project Manager.</p> <p><b>CLAIMS</b></p> <p>It shall be a condition of this contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and/or expenses due to any of the contract conditions, or by any other reason whatsoever, he shall present such claim or intent to claim notice to the PROJECT MANAGER within the contract period.</p>		
C	<p>No claims shall be entertained upon the expiry of the said contract period.</p> <p><b>PAYMENTS</b></p> <p>The tenderer's attention is drawn to the fact that <b>KENGEN STAFF RETIREMENT BENEFITS SCHEME SHALL NOT MAKE ADVANCE PAYMENTS UNLESS STATED IN AGREEMENTS AND CONDITIONS OF THIS CONTRACT</b> and that</p>		
D	<p>KENGEN pays for work done and Materials delivered on site; all in accordance with the conditions of contract agreement. in order to facilitate this, a list of general component elements for the works is given at the summary page of these specifications and the tenderer is requested to break down his tender sum commensurate to the said elements.</p> <p><b>PREVENTION OF ACCIDENT, DAMAGE OR LOSS</b></p>		
E	<p>The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other normal activities. The Contractor is instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of normal activities being carried out by the Client. The Contractor shall allow in his rates any expense he deems necessary by taking such care within the site.</p>		
F			
G	<p><b>BID SECURITY</b></p> <p>The contractor shall provide a bid security duly signed, sealed and stamped from an approved Bank of 1% of the bid value.</p> <p><b>CONTRACT PRICE</b></p> <p>This is a fixed price contract and therefore the tenderer shall not be</p>		



	<p>riembursed for any increases in the costs of materials and/ or labour in the execution of the works.</p> <p><b>MATERIALS FORM DEMOLITIONS</b></p> <p>Any materials from demolitions shall not be re-used and shall become the property of the employer. The contractor shall allow in his rates for the cost of transporting, storing, and securing the materials on site as directed by the project manager.</p>		
	Carried to Collection		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

Item	DESCRIPTION	Kshs.	Cts
A	<p><b>WORKING CONDITIONS</b></p> <p>Working hours shall be those generally adopted by good employers in the Building and Civil Engineering Trades in Kenya. The work must be carried out to cause the minimum inconvenience to the occupants of the adjoining premises.</p>		
B	<p><b>SIGNBOARD</b></p> <p>Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away a signboard as designed, specified and approved by the ProjectManager.</p>		
C	<p><b>LABOUR CAMPS</b></p> <p>The Contractor shall not be allowed to house labour on site. Allow for transporting workers to and from the site during the tenure of the contract.</p>		
D	<p><b>PRICING RATES</b></p> <p>The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.</p>		
E	<p><b>QUALITY OF WORKS</b></p> <p>The works should be of high quality and the contractor will be required to make samples of the work to be executed for approval by the project manager before he commences the carrying out of the works. The contractor should allow for sample works in his rates accordingly. Incase a sample does not meet the standards set by the project manager, the contractor shall be expected to make another sample at his cost until it is approved by the project manager.</p>		
	Carried to Collection		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

Item	DESCRIPTION	Kshs.	Cts
A	<p><b>SECURITY</b></p> <p>The Contractor shall allow for providing adequate security for the works and the workers in the course of execution of this contract. No claim will be entertained from the Contractor for not maintaining adequate security for both the works and workers.</p>		
B	<p><b>URGENCY OF THE WORKS</b></p> <p>The Contractor is notified that these works should be completed within the period stated in the form of tenderer. The Contractor shall allow in his rates for any costs he deems that he/she may incur by having to complete the works within the contract period.</p>		
C	<p><b>PAYMENT FOR MATERIALS ON SITE</b></p> <p>All materials for incorporation in the works must be stored on site before payment is effected, unless specifically exempted by the Project Manager. This is to include materials of the Contractor, nominated sub-Contractors and nominated suppliers.</p>		
D	<p><b>EXISTING SERVICES</b></p> <p>Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the area and he/she shall make whatever provisions may be required by the authorities concerned for the support, maintenance and protection of such services.</p>		
E	<p><b>PRICING OF PRELIMINARIES</b></p> <p>The tenderer is required to price the items covered in these preliminaries as items for which no price is entered will not be paid for but shall be deemed covered by other rates and prices in these Bills of Quantities.</p>		
F	<p><b>ADJOINING PROPERTY</b></p> <p>Take all precautions to prevent damage to adjoining property. Any damage occurring must be made good to the satisfaction of the project Manager and /or owner(s) of adjoining property at the contractor's expense.</p>		
G	<p><b>USE OF SITE</b></p> <p>Do not use the site for any purpose other than carrying out the works. Do not permit or display any advertisement without the consent of the project manager</p>		
	<b>Carried to Collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES

Item	DESCRIPTION	Kshs.	Cts
A	<p><b>PERFORMANCE BOND</b></p> <p>A bond of 10 % of the contract sum will be required in accordance with Clauses in the award of contract of the Instructions to Tenderer's. No payment on account for the workexecuted will be made to the contractor until he has submitted the Performance Bond to the Project Manager duly signed, sealed and stamped from an approved Bank.</p>		
B	<p><b>TENDER DOCUMENTS</b></p> <p>Tender documents are as listed in tender documents</p>		
C	<p><b>DELIVERY OF TENDER</b></p> <p>Tenders and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited at the offices as specified in the letter accompanying these documents or as indicated in the advertisement.</p> <p>Tenders will be opened at the time specified in the letter accompanying these Tender Documents or as indicated in the advertisement. Tenders delivered/received later than the above time will not be opened.</p>		
D	<p><b>VALUE ADDED TAX</b></p> <p>The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1<sup>st</sup> September 1993 which requires payment of VAT on all contracts. The tenderer is advised that in accordance with Government public notice No. 35 &amp; 36 Dated 11<sup>th</sup> September 2003 operational from 1<sup>st</sup> October 2003, withholding VAT will be levied against the contract sum by the Employer and remitted to the Commissioner of VAT through all interim certificates. The contractor should therefore include this tax in the Grand Summary page as indicated herein.</p>		
E	<p><b>CORRECTION OF ERRORS IN TENDER</b></p> <p>Arithmetical errors will be rectified as follows ;</p> <p>If there is a discrepancy between the unit price and the total prices that is obtained by multiplying the unit price and the quantity, the unit price shall prevail and the total price shall be corrected.</p> <p>If there is a discrepancy between words and figures, the amount in words will prevail.</p>		
F	<p><b>STANDARD FORMS</b></p> <p>Any tenderer with standard forms not filled as appropriate will be treated as non-responsive</p>		
G	<p><b>TENDER VALIDITY</b></p> <p>Tenders shall remain valid for a period of One Hundred and Twenty (120) days from the date of submission.</p>		
	Carried to Collection		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

Item	DESCRIPTION	Kshs.	Cts
	<p><b><u>PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO CONTRACT AGREEMENT</u></b></p> <p>The following are the insertions to be made in the appendix to the contract Agreement</p> <p>Period of Final Measurement      3 Months From taking Over Certificate Defects Liability Perid 6 Months from Practical Completion</p> <p>Date of Commencement              To be agreed with the Project Manager Date for Completion      .....Weeks from date of Commencement</p> <p>Liquidated Damages                  At the agreed rate per Week or part thereof</p> <p>Prime cost sums for wich the contractor desires to tender .....</p> <p>Period of interim certificates              30 Days</p> <p>Period of Honouring Certificates              30 Days</p> <p>Percentage of certified value Retained      5 %</p> <p>Limit of Retention Fund                      5%</p>		
	<b>Carried to Collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES

Item	DESCRIPTION	Kshs.	Cts
	<p><u>COLLECTION</u></p> <p>Brought forward from page PP/1 Brought forward from page PP/2 Brought forward from page PP/3 Brought forward from page PP/4 Brought forward from page PP/5 Brought forward from page PP/6</p>		
	<p>PARTICULAR PRELIMINARIES CARRIED TO BILL No.1 SUMMARY</p>		

PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS	CTS
	<b>GENERAL PRELIMINARIES</b>		
<b>A.</b>	<p><b>PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES</b></p> <p>Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specification.</p> <p>Preliminaries to the contract are mandatory conditions and responsibilities the contractor is required to fulfill for the complete and proper execution of the contract. The contractor is advised to read and understand all his obligations under preliminary. Should he find fulfillment of any of the items will lead to him incurring any cost not covered under measured works he shall price such works accordingly otherwise failure to price any item will be construed to mean that the tenderer has included it in other priced items of the bill of quantities. Prices <b>SHALL BE INSERTED</b> against items of "preliminaries" in the tenderer's priced Bills of Quantities.</p>		
<b>B.</b>	<p><b>ABBREVIATIONS</b></p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows: -</p> <p><i>C.M.</i> Shall mean cubic metre</p> <p><i>S.M.</i> Shall mean square metre</p> <p><i>L.M.</i> Shall mean linear metre</p> <p><i>MM</i> Shall mean Millimetre</p> <p><i>Kg.</i> Shall mean Kilogramme</p> <p><i>No.</i> Shall mean Number</p> <p><i>Prs.</i> Shall mean Pairs</p> <p><i>B.S.</i> Shall mean the British Standard Specification Published by the British Standards Institution, 2 Park Street, London W.I., England.</p> <p><i>Ditto</i> Shall mean the whole of the preceding description except as qualified in the description in which it occurs.</p> <p><i>m.s.</i> Shall mean measured separately.</p> <p><i>a.b.d</i> Shall mean as before described.</p>		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	KSHS	CTS
A.	<p><b>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</b></p> <p><i>Attendance;</i> Clause B19(a) of the Standard Method of Measurement is deleted and the following clause is substituted: -</p> <p>Attendance on nominated Sub-Contractors shall be given as an item in each case shall be deemed to include allowing use of standing scaffolding, mess rooms, sanitary accommodation, and welfare facilities; provision of special scaffolding where necessary; providing space for office accommodation and for storage of plant and materials; providing light and water for their work: clearing away rubbish; unloading checking and hoisting: providing electric power and removing and replacing duct cover, pipe casings and the like necessary for the execution and testing of Sub- Contractors' work and being responsible for the accuracy of the same.</p> <p><i>Fix Only:-</i></p> <p>"Fix Only" shall mean take delivery at nearest railway station (Unless otherwise stated), pay all demurrage charges, load and transport to site where necessary, unload, store, unpack, assemble as necessary, distribute to position,</p>		
B.	<p><b>EMPLOYER</b></p> <p>The "Employer" is <b>KenGen Staff Retirement Benefits Scheme</b></p> <p>The term "Employer" and "Government" wherever used in the contract document shall be synonymous</p>		
C.	<p><b>PROJECT MANAGER</b></p> <p>be <b>AEGIS DEVELOPMENT SOLUTIONS LIMITED</b> or such person or persons as may be duly authorized to represent him on behalf of the Procuring Entity.</p>		
D	<p><b>SUPERVISING CONSULTANTS</b></p> <p>The supervising Consultants shall be <b>AEGIS DEVELOPMENT SOLUTIONS LIMITED</b></p>		
	Carried to collection		



**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
A	<p><b>FORM OF CONTRACT</b></p> <p>Standard Tender Document for Procurement of Building and Civil Works(2021 Edition) included herein The Conditions of Contract are also included herein <b>Conditions of Contract</b> These are numbered from 1 to 37 as set out in pages 18 to 38 of these tender documents.Particulars of insertions to be made in the Appendix to the Contract Agreement will be found in the Particular Preliminaries part of these Bills of Quantities</p>		
B	<p><b>PERFORMANCE BOND.</b></p> <p>The Contractor shall find and submit on the Form of Tender an <b>approved bank</b> and who will be willing to be bound the Government in and amount equal to ten per cent (10%) of the Contract amount for the due performances of the Contract up to the date of completion as certified by the PROJECT MANAGER and who will when and if called upon, sign a Bond to that effect on the relevant standard form included herein. (without the addition of any limitations) on the same day as the Contract Agreement is signed, by the Government, the Contractor shall furnish within seven days another Surety to the approval of the Government.</p>		
C	<p><b>PLANT, TOOLS AND VEHICLES</b></p> <p>Allow for providing all scaffolding, plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.</p>		
D	<p><b>TRANSPORT.</b></p> <p>Allow for transport of workmen, materials, etc., to and from the site at such hours and by such routes as may be permitted by the competent authorities.</p>		
	<b>Carried to collection</b>		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>KSHS</b>	<b>CTS</b>
<b>A</b>	<b>MATERIALS AND WORKMANSHIP.</b>  All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that they are onsite when required for use in the works. The Bills of Quantities shall not be used for the purpose of ordering		
<b>B</b>	<b>SIGN FOR MATERIALS SUPPLIED.</b>  The Contractor will be required to sign a receipt for all articles and materials supplied by the PROJECT MANAGER at the time of taking delivery thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacements of any such loss or damage with articles and/or materials which will be supplied by the PROJECT MANAGER at the current market prices including Customs Duty and V.A.T., all at the Contractor's own cost and expense, to the satisfaction of the PROJECT MANAGER		
<b>C</b>	<b>STORAGE OF MATERIALS</b>  The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the PROJECT MANAGER. Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.		
	<b>Carried to collection</b>		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<p><b>SAMPLES</b></p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the PROJECT MANAGER for his approval until such samples are approved by the PROJECT MANAGER and the PROJECT MANAGER, may reject any materials or workmanship not in his opinion to be up to approved samples. The PROJECT MANAGER shall arrange for the testing of such materials as he may at his discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the PROJECT MANAGER. The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by the Ministry of Roads, Housing and Public Works.</p> <p>The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the PROJECT MANAGER The Contractor shall allow in his tender for such samples and tests except those in connection with nominated sub-contractors' work.</p>		
<b>B.</b>	<p><b>GOVERNMENT ACTS REGARDING WORKPEOPLE ETC.</b></p> <p>Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health and welfare of the workpeople. The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps , passes for transport, etc. It is most important that the Contractor, before tendering, shall obtain from the relevant Authority</p>		

	<p>the fullest information regarding all such regulations and/or restrictions which may affect the information regarding all such regulations and/or restrictions which may affect the organisation of the works, supply and control of labour, etc., and allow accordingly in his tender.</p> <p>entertained.</p>		
<b>C.</b>	<p><b>SECURITY OF WORKS ETC.</b></p> <p>The Contractor shall be entirely responsible for the security of all the works stores, materials, plant, personnel, etc., both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.</p>		
	<b>Carried to collection</b>		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<b>PUBLIC AND PRIVATE ROADS.</b>  Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority and the PROJECT MANAGER		
<b>B.</b>	<b>EXISTING PROPERTY.</b>  The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the PROJECT MANAGER		
<b>C.</b>	<b>VISIT SITE AND EXAMINE DRAWINGS.</b>  The Contractor is recommended to examine the drawings and visit the site the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which, may affect his tender. No claim arising from his failure to comply with this recommendation will be considered.		
<b>D.</b>	<b>ACCESS TO SITE AND TEMPORARY ROADS.</b>  Means of access to the Site shall be agreed with the PROJECT MANAGER prior to commencement of the work and Contractor must allow for building any necessary temporary access roads (approximately 70 metres long) for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the Site. Upon completion of the works, the Contractor shall remove such temporary access roads; temporary culverts, bridges, etc., and make good and reinstate all works and surfaces disturbed to the satisfaction of the PROJECT		

E.	MANAGER  <b>AREA TO BE OCCUPIED BY THE CONTRACTOR</b>  The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on site by the PROJECT MANAGER		
	Carried to collection		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<p><b>OFFICE ETC. FOR THE PROJECT MANAGER</b></p> <p>afterwards dismantle the site office of the type noted in the Particular Preliminaries, complete with Furniture. He shall also provide a strong metal trunk complete with strong hasp and staple fastening and two keys. He shall provide, erect and maintain a lock-up type water or bucket closet for the sole use of the PROJECT MANAGER including making temporary connections to the drain where applicable to the satisfaction of Government and Medical Officer of Health and shall provide services of cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition from commencement to the completion of the works and dismantle and make good disturbed surfaces. The office and closet shall be completed before the Contractor is permitted to commence the works. The Contractor shall make available on the Site as and when required by the "PROJECT MANAGER" a modern and accurate level together with levelling staff, ranging rods and 50 metre metallic or linen tape. The office shall be completely furnished and equiped with 3 No. branded desk top computers with atleast 2.90 GH2,1.87GBRam with pentium 4 processor and FT monitor softwares, high internet speed and telephone connectivity for office use and hand over the equipment to Kenyatta National hospital upon Completion. The Office should be big enough to hold 20 people complete with furniture , an office for the clerk of works and a sample room</p>		
<b>B.</b>	<p><b>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</b></p> <p>electric light and power required for use in the works. The Contractor must make his own arrangements for connection to the nearest suitable water main and for metering the water used. He must also provide temporary tanks and meters as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the PROJECT</p>		

	<p>MANAGER. The Contractor shall pay all charges in connection herewith. No guarantee is given or implied that sufficient water will be available from mains and the Contractor must make his own arrangements for augmenting this supply at his own cost. Nominated Sub- contractors are to be made liable for the cost of any water or electric current used and for any installation provided especially for their own use.</p>		
C.	<p><b>SANITATION OF THE WORKS</b></p> <p>The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the PROJECT MANAGER</p>		
D.	<p><b>SUPERVISION AND WORKING HOURS</b></p> <p>in all respects of the PROJECT MANAGER who shall at all times during normal working hours have access to the works and to the yards and workshops of the Contractor and sub-Contractors or other places where work is being prepared for the contract.</p>		
	<b>Carried to collection</b>		



**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<b>PROVISIONAL SUMS.</b>  have the meaning stated in Section A item A7(i) of the Standard Method of Measurement. Such sums are net and no addition shall be made to them for profit.		
<b>B.</b>	<b>PRIME COST (OR P.C.) SUMS.</b>  Quantities shall have the meaning stated in Section A item A7 (ii) of the Standard Method of Measurement . Persons or firms nominated by the PROJECT MANAGER to execute work or to provide and fix materials or goods are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described herein as Nominated		
<b>C.</b>	<b>PROGRESS CHART.</b>  agreement with the PROJECT MANAGER a Progress Chart for the whole of the works including the works of Nominated Sub-Contractors ; one copy to be handed to the PROJECT MANAGER and a further copy to be retained on Site. Progress to be recorded and chart to be amended as necessary as the work proceeds.		
<b>D.</b>	<b>ADJUSTMENT OF P.C. SUMS.</b>  In the final account all P.C. Sums shall be deducted and the amount properly expended upon the PROJECT MANAGER'S order in respect of each of them added to the Contract sum. The Contractor shall produce to the PROJECT MANAGER such quotations, invoices or bills, properly receipted, as may be necessary to show the actual details of the sums paid by the Contractor. Items of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid. Items of "attendance" (as previously described) following P.C. Sums shall be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid) and this shall apply even though the Contractor's priced Bill shows a percentage in the rate column in respect of		

	<p>them. Should the Contractor be permitted to tender and his tender be accepted of any work for which a P.C. Sum is included in these Bill of Quantities profit and attendance will be allowed at the same rate as it would be if the work were executed by a Nominated Sub-Contractor.</p>		
	<b>Carried to collection</b>		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<p><b>ADJUSTMENT OF PROVISIONAL SUMS.</b></p> <p>In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the PROJECT MANAGER's order added to the Contract Sum. Such work shall be valued , but should any part of the work be executed by a Nominated Sub-Contractor, the value of such work or articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p>		
<b>B.</b>	<p><b>NOMINATED SUB-CONTRACTORS</b></p> <p>When any work is ordered by the PROJECT MANAGER to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts and shall thereafter be responsible for such sub-contractors in every respect. Unless otherwise described the Contractor is to provide for such Sub-Contractors any or all of the facilities described in these Preliminaries. The Contractor should price for these with the nominated Sub-contract Contractor's work concerned in the P.C. Sums under the description "add for Attendance".</p>		
<b>C.</b>	<p><b>DIRECT CONTRACTS</b></p> <p>Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C. Sum the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.</p>		
<b>D.</b>	<p><b>ATTENDANCE UPON OTHER TRADESMEN, ETC.</b></p> <p>The Contractor shall allow for the attendance of trade upon trade and shall</p>		

	<p>afford any tradesmen or other persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the PROJECT MANAGER and the work will be measured and paid for to the extent executed at rates provided in these Bills.</p>		
	<b>Carried to collection</b>		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
A.	<p><b>INSURANCE</b></p> <p>The Contractor shall insure as required in Conditions No. 30 of the Conditions of Contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the PROJECT MANAGER either by production of an Insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clauses have been complied with in all respects. Thereafter the PROJECT MANAGER shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the PROJECT MANAGER's inspection.</p>		
B.	<p><b>PROVISIONAL WORK</b></p> <p>All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this Contract shall left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the PROJECT MANAGER Immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT MANAGER. If the Contractor makes default in these respects he shall if the PROJECT MANAGER so directs uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense.</p>		
C.	<p><b>ALTERATIONS TO BILLS, PRICING, ETC.</b></p> <p>Any unauthorized alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump Sums to cover trades or</p>		

	groups of work must be broken down to show the price of each item before they will be accepted.		
<b>D.</b>	<b>BLASTING OPERATIONS</b>  Blasting will only be allowed with the express permission of the PROJECT MANAGER in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the PROJECT MANAGER governing the use and storage of explosives.		
	<b>Carried to collection</b>		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<p><b>MATERIALS ARISING FROM EXCAVATIONS</b></p> <p>the Government. Unless the PROJECT MANAGER directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the PROJECT MANAGER Should such permission be given, the Contractor shall make do allowance for the value of the materials so used at a price to be agreed.</p>		
<b>B.</b>	<p><b>PROTECTION OF THE WORKS.</b></p> <p>Provide protection of the whole of the works contained in the Bills of Quantities, including casing, casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the PROJECT MANAGER and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Government.</p>		
<b>C.</b>	<p><b>REMOVAL OF RUBBISH ETC.</b></p> <p>Removal of rubbish and debris from the buildings and site as it accumulates and at the completion of the works and remove all plant, scaffolding and unused materials at completion.</p>		
<b>D.</b>	<p><b>WORKS TO BE DELIVERED UP CLEAN</b></p> <p>Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the PROJECT MANAGER</p>		
	<b>Carried to collection</b>		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<p><b>GENERAL SPECIFICATION.</b></p> <p>For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads and Public Works and Housing General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be allowed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.</p>		
<b>B.</b>	<p><b>TRAINING LEVY</b></p> <p>The Contractor's attention is drawn to legal notice No. 237 of October, 1971, which requires payment by the Contractor of a Training Levy at the rate of 1/4 % of the Contract sum on all contracts of more than Kshs. 50,000.00 in value.</p>		
<b>C.</b>	<p><b>MATERIALS ON SITE</b></p> <p>All materials for incorporation in the works must be stored on or adjacent to the site before payment is affected unless specifically exempted by the PROJECT MANAGER. This includes the materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.</p>		
<b>D.</b>	<p><b>HOARDING</b> <i>Only Where necessary</i></p> <p>The Contractor shall enclose the site or part of the works under construction with a hoarding 2400 mm high consisting of iron sheets on 100 x 50 mm timber posts firmly secured at 1800 mm centres with two 75 x 50 mm timber rails approximate distance 500 metres. The Contractor is in addition required to take all precautions necessary for the safe custody of the works, materials, plant, public and Employer's property on the site.</p>		
<b>E.</b>	<p><b>CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</b></p> <p>Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the</p>		

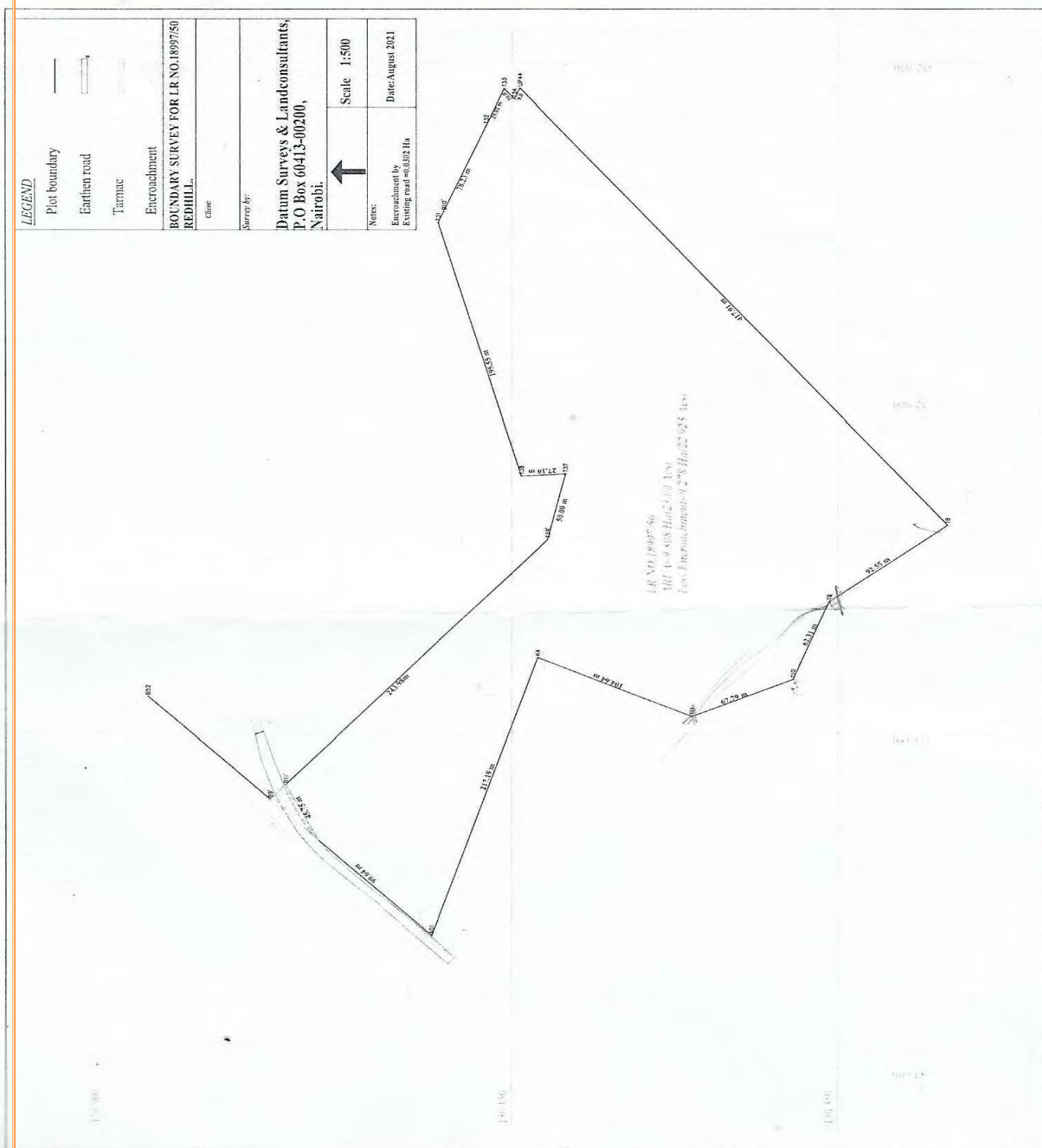


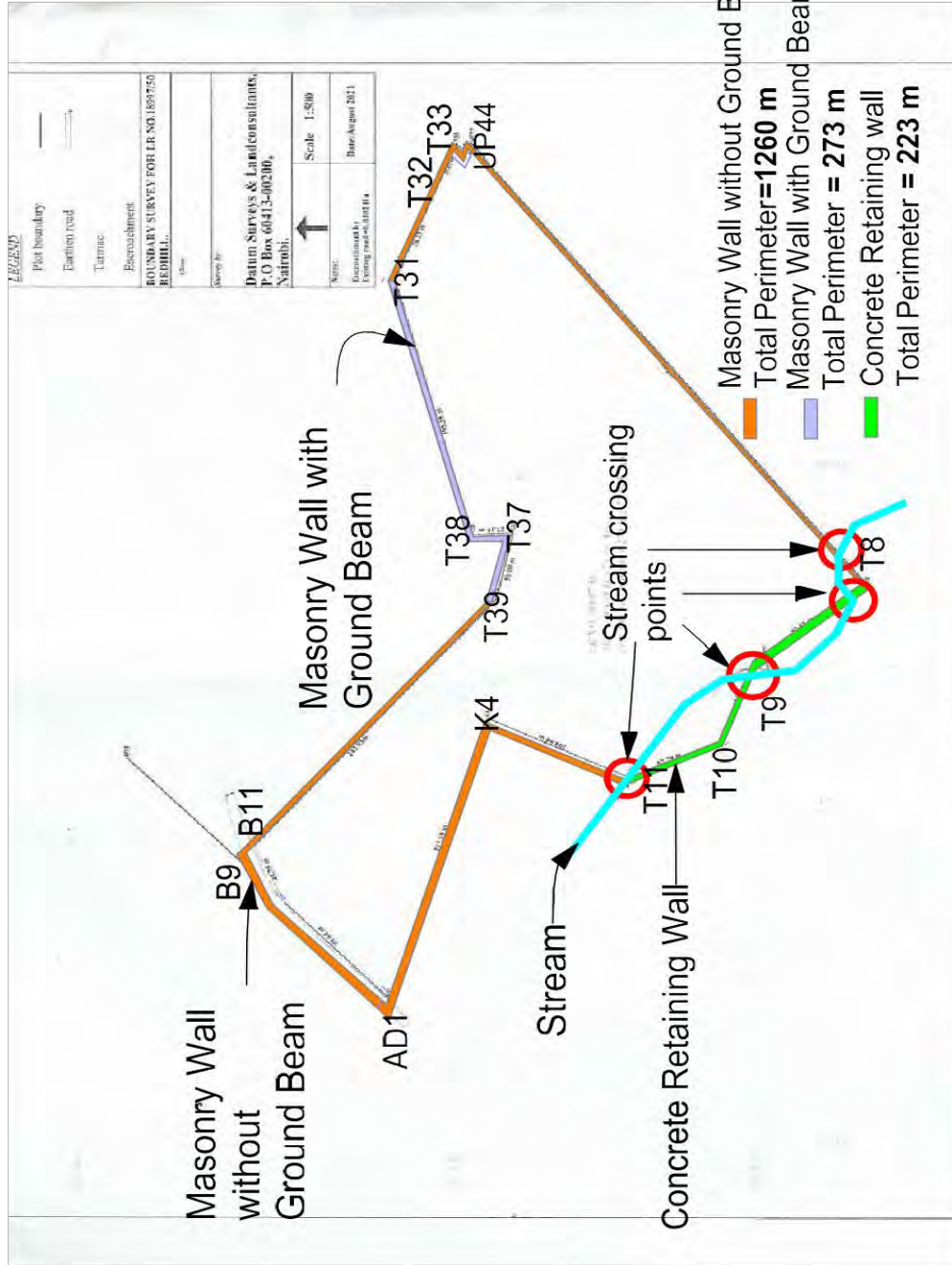
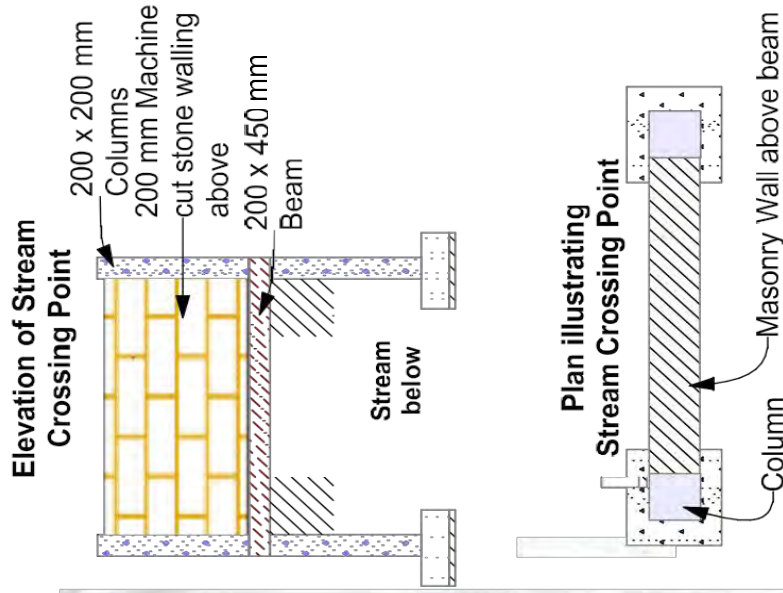
	works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Project Manager and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.		
<b>F</b>	<b>SUNDRY</b> Any other item not specifically outlined above but needed for the purpose of work execution shall be deemed to be included in the priced items		
	<b>Carried to Collection</b>		

**PROPOSED PERIMETER WALL FOR KENGEN DC SCHEME PARTICULAR PRELIMINARIES**

ITEM	DESCRIPTION	KSHS	CTS
	<p align="center"><u>COLLECTION</u></p> <p align="center">Brought Forward from Page GP/1 Brought Forward From Page GP/2 Brought Forward From Page GP/3 Brought Forward From Page GP/4 Brought Forward From Page GP/5 Brought Forward From Page GP/6 Brought Forward From Page GP/7 Brought Forward From Page GP/8 Brought Forward From Page GP/9 Brought Forward From Page GP/10 Brought Forward From Page GP/11 Brought Forward From Page GP/12</p>		
	<p align="center">TOTAL FOR GENERAL PRELIMINARIES CARRIED TO BILL No. 1 SUMMARY</p>		

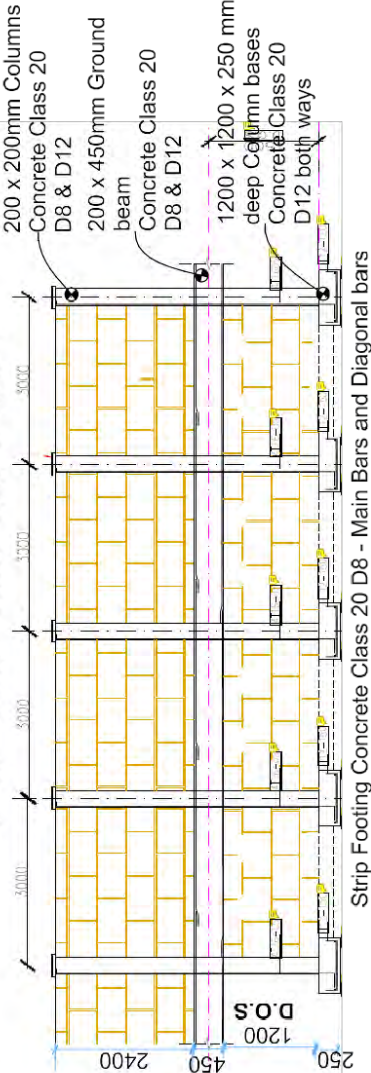
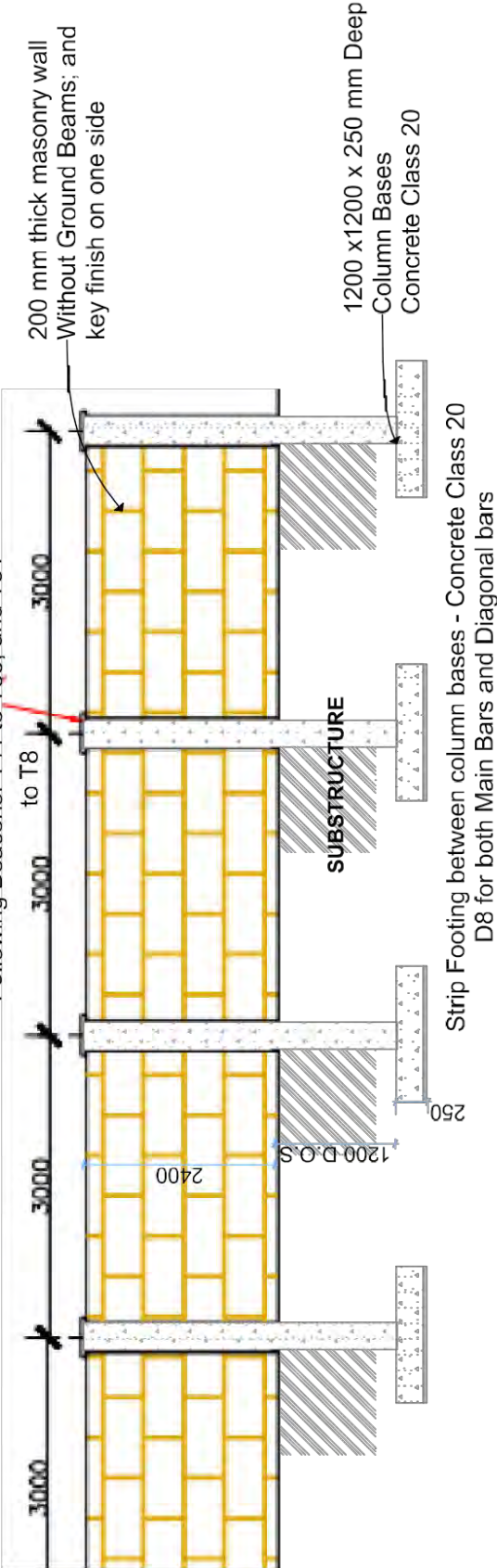

## SECTION V – DRAWINGS





DRAWING BY;  Aegis Development Solutions Limited SEPTEMBER 2022	PROCURING ENTITY <b>KENGEN DEFINED CONTRIBUTION SCHEME</b>	DRAWING TITLE <b>PERIMETER WALL LAYOUT</b>
	PROJECT TITLE <b>PROPOSED PERIMETER WALL ON REDHILL LAND, OFF LIMURU ROAD; LIMURU SUBCOUNTY; KIAMBU COUNTY</b>	SCALE <b>Drawing Not to Scale</b>



<div> <p><b>MASONRY WALL WITH GROUND BEAM</b></p> </div> <div> <p>Perimeter = 272.65 m Between Beacons: T39 to T31</p> </div>  <div> <p><b>MASONRY WALL WITHOUT GROUND BEAM</b></p> </div> <div> <p>Perimeter = 1260 m</p> </div> <div> <p>Following Beacons: T11 to T39, and T31</p> </div> 	<div> <p>DRAWING BY;</p> </div> <div>  </div> <div> <p>SEPTEMBER 2022</p> </div> <div> <p>PROCURING ENTITY</p> </div> <div> <p><b>KENGEN DEFINED CONTRIBUTION SCHEME</b></p> </div> <div> <p>PROJECT TITLE</p> </div> <div> <p><b>PROPOSED PERIMETER WALL ON REDHILL LAND, OFF LIMURU ROAD; LIMURU SUBCOUNTY; KIAMBU COUNTY</b></p> </div> <div> <p>DRAWING TITLE</p> </div> <div> <p><b>PERIMETER WALL LAYOUT</b></p> </div> <div> <p>SCALE</p> </div> <div> <p><b>Drawing Not to Scale</b></p> </div>
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## SECTION VI ~ SPECIFICATIONS

KenGen Defined Contribution Scheme has acquired 23 acres of land at Redhill, Limuru sub-County, Kiambu County. The property is not fenced and hence The Scheme wishes to construct a perimeter wall to secure the land and keep off encroachers. The works will comprise a quarry stones wall, steel gate and a guard house.

## SECTION VII~ BILLS OF QUANTITIES

[illegible]

295A1 KENGEN PERIMETER FENCE~OPTION 1

Item	Statutory Approval Costs	Qty	Unit	Rate	Amount	
	SUMMARY				Kshs	Cts
	Section 1 Statutory Approvals			Page 1		
	To Summary Kshs					



## 295A1 KENGEN PERIMETER FENCE-OPTION 1

Item	Masonry Perimeter Fence as Option 1	Qty	Unit	Rate	Amount	
	Section 1 Perimeter Fence				Kshs	Cts
	Site Clearance (All Provisional)					
A	Clear the entire site of shrubs and bushes as directed	9300 0	m2			
B	Cut down trees, cut them into logs of approximately 1500mm, grub up roots, fill with selected soil and dispose debris as directed girth above 600mm but not exceeding 900mm.	12	nr			
	Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials					
C	For foundations commencing at ground level not exceeding 1.50 metres deep	980	m3			
D	For column bases commencing at ground level not exceeding 1.50 metres deep					
	Disposal	965	m3			
E	Backfilling to make up levels					
F	Backfilling around foundations	390	m3			
	Plain concrete mix 1:4:8 class 10	878	m3			
G	Blinding under foundations and bases, thickness 50 mm					
	Vibrated reinforced concrete Class 20/20					
H	Foundations	1615	m2			
I	Column bases					
J	Ground beams		m3			
K	Substructure	137	m3			
L	Columns		m3			
	Superstructure	193	m3			
	Columns		m3			
	To Collection Kshs	25				
		32				
		51				

## 295A1 KENGEN PERIMETER FENCE-OPTION 1

Item	Masonry Perimeter Fence as Option 1	Qty	Unit	Rate	Amount	
	<b>Section 1 Perimeter Fence</b>				Kshs	Cts
	<b>Vibrated reinforced concrete class 25</b>					
A	Retaining walls, thickness 200	401	m2			
B	mm Tier beam at the stream					
C	crossing points (4no.) to create water passage at Beacon T11, T9 & T8; beam size 200 x 600 x 4200mm length	2	m3			
	Foundation columns at the stream crossingpoints	9	m3			
D	<b>Vibrated reinforced concrete Class 25/20</b>					
	Foundations	80	m3			
E	<b>Construction joints</b>					
	15mm thick isolation joint with 15mm diameter bond breaking cord and approved polyurethane sealant applied according to manufacturer's instructions	370	m			
F	<b>Deformed high yield ribbed bars</b>					
G	<b>reinforcement to BS 4449; cut, bend,</b>					
H	<b>hoist and fix as directed : including all</b>	19310	kg			
I	<b>necessary tying wires, spacer blocks,</b>		kg			
	<b>templates and spacer stools</b>	2080	kg			
J	8 Diameter bars		kg			
K	10 Diameter bars	37126				
L	12 Diameter bars	983	m2			
M	16 Diameter bars		m2			
			m2			
			m2			
N	<b>Formwork</b>	909				
O	Sides of foundations, bases, etc. Sides of superstructure columns Sides of substructure columns Sides of ground beams	515	m2			
		257	m2			
		248				
	<b>Smooth marine board formwork including</b>					
	<b>mould oil applied on the surfaces where</b>					
	<b>necessary</b>					
	Sides of columns	24				
	Soffits and sides of beams	24				
	<b>To Collection Kshs</b>					

## 295A1 KENGEN PERIMETER FENCE-OPTION 1

Item	Masonry Perimeter Fence as Option 1	Qty	Unit	Rate	Amount	
	Section 1 Perimeter Fence				Kshs	Cts
A	Smooth marine board formwork including mouldoil applied on the surfaces where necessary	799	m2			
B	Sides of retaining wall					
C	Precast concrete trimmings finished fair onall exposed faces	1750	m			
D	Copings with 2 labours, size 300 x 75 mm	536	nr			
	Pier caps, size 400 x 300 x 50 mm					
	Weep holes					
	60 mm diameter Weep holes in 50 mm diameterUPVC pipe average length 300 mm encased in concrete wall at intervals of 3no. per bay as per the structural engineer's drawings anddetails	1686	nr			
E	Machine cut natural stone walling, bedded and jointed in cement sand mortar (1:3), reinforced with 20 gauge x 25mm wide hoopiron reinforcement and column wall ties in every alternate course	3843	m2			
F	200mm thick superstructure walling					
G	Approved natural quarry stone walling; bedded, jointed and pointed in cement sandmortar 1:3 laid in regular courses; reinforced with 20 gauge x 25mm wide hoopiron reinforcement in each alternate course	2180	m2			
	200 mm thick walling to foundation					
	200mm thick walling in cement sand rendermix 1:3	3843	m2			
H	Extra fair face and raked horizontal joints and flush pointing to horizontal joints, 10mmdiameter	1750	m			
	Bituminous felt damp proof courses laid inand including levelling screed of cement mortar					
	In walling, width 200 mm					
	To Collection Kshs					

**295A1 KENG PERIMETER FENCE~OPTION 1**

Item	Masonry Perimeter Fence as Option 1	Qty	Unit	Rate	Amount	
	Section 1 Perimeter Fence				Kshs	Cts
A	Cement and sand 1:3 rendering					
	Rendering to columns finished with a steel trowel, thickness 15 mm	386	m2			
	To Collection Kshs					
				COLLECTION		
				Page 3		
				Page 4		
				Page 5		
				Page 6		
	To Summary Kshs					

295A1 KENGEN PERIMETER FENCE-OPTION 1

Item	Masonry Perimeter Fence as Option 1	Qty	Unit	Rate	Amount	
	SUMMARY				Kshs	Cts
	Section 1 Perimeter Fence			Page 6		
	To Summary Kshs					

295A1 KENGEN PERIMETER FENCE~OPTION 1

Item	Qty	Unit	Rate	Amount	
<b>SUMMARY</b>					
				Kshs	Cts
Statutory Approval Costs			Page 2		
Masonry Perimeter Fence as Option 1			Page 7		
<b>Total Kshs</b>					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
	<b>Site Clearance (All Provisional)</b>					
A	Clear designated areas of site of shrubs,bush and small trees, grub up roots, fill with selected soil and burn debris	12	m2			
B	Excavate to remove topsoil and load, wheeland deposit where directed, average depth commencing from ground level 150 mm	12	m2			
C	<b>Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials</b>	12	m3			
D	For foundations commencing at reduced level not exceeding 1.50 metres deep	7	m3			
E	For column bases commencing at reduced level not exceeding 1.50 metres deep	1	m3			
F	<b>Disposal</b>					
G	Backfilling to make up levels Backfilling around foundations	9	m2			
H	<b>Imported filling</b>	10	m2			
I	Hardcore bed, thickness 300 mm					
J	Murram blinding to hardcore, etc., thickness 50 mm	10	m2			
	<b>Damp-proof membranes</b>	10				
	1000 Gauge polythene laid under surface beds	10				
	<b>To Collection</b>					
	<b>Kshs</b>					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
	<b>Anti-termite treatment</b>					
A	Premise 200 SC Chemical or equal and approved chemical anti-termite treatment executed by an approved specialist under a ten-year guarantee to surfaces of hardcore, etc. (Allow for treating vertical sides of foundation trenches, column base pits and around building plinth as per manufacturers printed instructions, quantity measured flat)	10	m2			
B	<b>Plain concrete mix 1:4:8</b>	10	m2			
	Blinding under strip foundations, thickness 50 mm	3	m3			
C	<b>Vibrated reinforced concrete Class 25/20</b>		m2			
D		10	m3			
E	Strip foundation	1				
	Beds, thickness 100 mm					
	<b>Columns</b>					
F	<b>Deformed high yield ribbed bars reinforcement to BS 4449; cut, bend, hoist and fix as directed: including all necessary tying wires, spacer blocks, templates and spacer stools</b>		kg	kg		
G		233	kg			
H	8 Diameter bars	135				
I	10 Diameter bars	83	m2			
	12 Diameter bars					
J	<b>Steel mesh fabric reinforcement to B.S.4483</b>		m			
	Layer of mesh fabric reinforcement laid in blinding (measured nett - no allowance made for laps) ref. no. A98	10				
	<b>Formwork</b>					
	Edges of beds, etc. sawn timber 75-150 mm high	12				
	<b>To Collection</b>				Kshs	



## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
A	<b>Sawn timber formwork To Sides of column bases</b>	6	m			
B	<b>of strip footing</b>	2	m			
C	<b>Smooth marine board formwork including mould oil applied on the surfaces where necessary</b>	8	m			
	<b>Sides of columns</b>	5	m2			
D	<b>Approved natural quarry stone walling; bedded, jointed and pointed in cement sandmortar 1:3 laid in regular courses; reinforced with 20 gauge x 25mm wide hoopiron reinforcement in each alternate course</b>	20	m2			
E	<b>200 mm thick walling to foundation</b>	17	m			
F	<b>Bituminous felt damp proof courses laid inand including levelling screed of cement mortar</b>	12	m2			
	<b>In walling, width 200 mm mm</b>					
G	<b>Cement and sand 1:3 render</b>	12	m2			
	<b>Finish to plinths steel trowelled smooth,20mm thick</b>					
	<b>Prepare and apply two coats bituminouspaint</b>	12	m2			
	<b>Rendered plinths</b>					
	<b>To Collection Kshs</b>					

**295B1 KENGEN GATEHOUSE & PTT LATRINE**

Item	Gate House	Qty	Unit	Rate	Amount	
	Section 1 Substructure Works (All Provisional)				Kshs	Cts
				COLLECTION		
				Page 1		
				Page 2		
				Page 3		
	To Summary Kshs					

**295B1 KENGEN GATEHOUSE & PIT LATRINE**

Item	Gate House	Qty	Unit	Rate	Amount	Cts
	<b>Section 2 Reinforced Concrete Superstructure</b>				Kshs	
	<b>Vibrated reinforced concrete Class 25/20</b>					
A	Suspended slabs, thickness 150 mm	8	m2			
B	Beams Columns	1	m3			
C	Deformed high yield ribbed bars reinforcement to BS 4449; cut, bend, hoist and fix as directed: including all necessary tying wires, spacer blocks, templates and spacer stools	1	m3			
	8 Diameter bars					
D	12 Diameter bars	111	kg			
E	Smooth marine board formwork including mould oil applied on the surfaces where necessary	280	kg			
	Sides of columns					
F	Soffits and sides of beams	11	m2			
G	Soffits of suspended slab	19	m2			
H	Edges of suspended slab girth 75-150mm	8	m2			
I		12	m			
	<b>To Summary</b>				Kshs	

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House Section 3 Walling	Qty	Unit	Rate	Amount	
					Kshs	Cts
	Machine cut natural stone walling, bedded, and jointed in cement sand mortar (1:3), reinforced with 20 gauge x 25mm wide hoopiron reinforcement and column wall ties in every alternate course					
A	200mm thick external walls	33	m2			
B	200mm thick Internal walls	11	m2			
To Summary Kshs						

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House Section 4 Doors	Qty	Unit	Rate	Amount	
					Kshs	Cts
A	<b>Flush doors to B.S. 459 (Part 2)</b>					
	45 mm Solid core flush doors faced both sides with 6 mm mahogany veneer and hardwood lipped all round, door to details and approval, overall size 900 x 2400 mm	2	nr			
B	<b>Doors, frames and finishings in wrought mahogany</b>					
	25mm Quadrant Bead	11	m			
C	Glazing beads with two labours fixed with cups and screws 25 x 25 mm	2	m			
D	Architraves with one labour size, 40 x 25 mm	11	m			
E	<b>Wrought Mahogany</b>					
	Frames with 2 labours plugged 200 x 50 mm	11	m			
F	<b>Ironmongery ~ supply and fix with matching screws</b>					
	Pairs heavy duty steel butt hinges 100 mm	3	nr			
G	Two lever lock with Silver Aluminium handles Union or equal and approved	1	nr			
H	Oval brass - floor mounted	1	nr			
I	<b>Clear sheet glass</b>					
	4 mm Glass and glazing to wood with beads (measured separately) in panes 0.1 - 1m <sup>2</sup>	1	m <sup>2</sup>			
J	<b>Knot, prime, stop and apply two undercoats and one matt finishing coat 'crown' varnish to woodwork</b>					
	Timber surfaces, 200-300 mm girth	11	m			
To Collection Kshs						

**295B1 KENGEN GATEHOUSE & PTT LATRINE**

Item	Gate House	Qty	Unit	Rate	Amount	
A	Section 4 Doors	9	m2		Kshs	Cts
	Knot, prime, stop and apply two undercoats and one matt finishing coat 'crown' varnishto woodwork					
	Timber general surfaces					
	To Collection Kshs					
	To Summary Kshs					
				COLLECTION	N	
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				Page 8		

295B1 KENGEN GATEHOUSE & PIT LATRINE

Item		Qty	Unit	Rate	Amount Kshs	Cts
	Gate House					
	Section 5 Windows					
	Powdercoated aluminium framed windows including mullions and transoms size 75 x 50mm complete with equal top hung sash, equal fixed panels ,complete with 6.38 mm thick laminated glass and glazing with aluminium beads, rubber beading ,all ironmongery and fixing to masonry jambs andpointing all round with silicon all to architect's details and approval					
A	Window type A1 at security desk overall size 1200 x 1200mm high	1	nr			
B	Window type B at the WC overall size 600 x900mm high	1	nr			
	To Summary Kshs					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	Section 6 Roof and Rain Water Disposal				Kshs	Cts
A	<b>Precast concrete trimmings finished fair on all exposed faces</b>	12	m			
	Copings with 2 labours, size 300 x 50 mm					
B	<b>Cast Iron Fulbora</b>	2	nr			
	150mm diameter fulbora with 200 x 200 mm heavy duty mild steel gratings cover for roof slab drainage through Upvc Pipes (m.s) to Architects/engineer's Approval					
C	<b>Machine cut natural stone walling, bedded and jointed in cement sand mortar (1:3), reinforced with 20 gauge x 25mm wide hoop iron reinforcement and column wall ties in every alternate course</b>	14	m <sup>2</sup>			
	200mm thick parapet walls above Gate House					
D	<b>Bituminous felt damp proof courses laid in and including levelling screed of cement mortar</b>	12	m			
E	In walling beneath coping, width 200 mm mm					
	<b>Waterproofing to suspended roof slab</b>					
	Clean surface, supply and install by blow torching, two layers of 4mm thick modified Imper-italia APP membrane rubber water proofing finish as supplied by Engineering supplies 2001 Limited or other equal and approved suppliers on cement sand screed (m.s) to engineer's approval	8	m <sup>2</sup>			
F	150 mm high skirting in two layers of 4mm thick modified Imper-italia APP membrane rubber water proofing as before described on rendered walls (m.s)	12	m			



		To Collection Kshs					
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**295B1 KENGEN GATEHOUSE & PTT LATRINE**

Item		Qty	Unit	Rate	Amount	
					Kshs	Cts
	<b>Gate House</b>					
	<b>Section 6 Roof and Rain Water Disposal</b>					
	<b>Concrete floor tiles and fittings to B.S.1197</b>					
A	Precast Concrete interlocking tiles; 150 x 150 x 15 mm thick paving bedded jointed and grouted up in interlocking concrete tiles mm cement and sand 1:1 (Colour as selected by the architect)	8	m <sup>2</sup>			
B	150 mm high concrete tile Skirting size 15 mm thick	12	m			
	<b>Cement and Sand (1:4) beds and backings</b>					
C	Beds to receive 4mm thick modified Imper-italia APP membrane rubber water proofing (m.s) flooring, finished with a wood float, thickness 40 mm	8	m <sup>2</sup>			
D	Beds to receive interlocking concrete tiles (m.s) flooring, finished with a wood float, thickness 40 mm	8	m <sup>2</sup>			
	<b>Prepare and apply three coats approved textured paint</b>					
E	Rendered walls externally	31	m <sup>2</sup>			
	<b>To Collection Kshs</b>					
				<b>COLLECTION N</b>		
				Page 10		
				Page 11		
	<b>To Summary Kshs</b>					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House Section 7 External Finishes	Qty	Unit	Rate	Amount	
					Kshs	Cts
A	200mm thick walling in cement sand rendermix 1:3					
	Extra fair face and raked horizontal joints and flush pointing to horizontal joints, 10mmdiameter	34	m2			
B	Cement and sand 1:4 rendering					
	To exterior sides of the masonry and concretefinished with a wood trowel to receive final finish, thickness 15 mm	4	m2			
C	Prepare and apply three coats Crown"Permaplast" paint					
	Rendered walls externally	4	m2			
To Summary Kshs						

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House Section 8 Internal Finishes	Qty	Unit	Rate	Amount	
					Kshs	Cts
	<b>Cement sand plaster mix 1:3</b>					
A	To Soffits of suspended slab to receive paint (m.s), thickness 25 mm	8	m2			
	<b>Cement sand plaster mix 1:4</b>					
B	To masonry or concrete surfaces to receive ceramic wall tiles (m.s), thickness 25 mm	11	m2			
C	To masonry or concrete surfaces to receive paint (m.s), thickness 25 mm	78	m2			
	<b>Ceramic wall tiles</b>					
D	Supply and fix 600 x 450 x 8mm thick approved ceramic wall tiles on plastered wall (m.s) including bedding in approved adhesive and pointing with matching coloured chemical and moisture resistant grout; including 2mm tile spacers where necessary to approved pattern	11	m2			
	<b>Non slip Ceramic floor tiles</b>					
E	Supply and fix 600 x 300 x 10 mm thick Ceramic non-slip floor tiles fixed on cement sand screed (m.s) with approved adhesive and pointed with matching coloured chemical and moisture resistant grout; including 3 mm tile spaces where required all match the approved pattern	8	m2			
F	100 mm high tile skirting	23	m			
	<b>Corner edge strip to tiles</b>					
G	Aluminium tile corner strips L profile - Matt Finish, sizes 12 mm	7	m			
	<b>Cement and Sand (1:4) beds and backings</b>					
H	Beds to receive Non slip ceramic tiles (m.s) flooring, finished with a wood float, thickness 30 mm	8	m2			
To Collection Kshs						

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
					Kshs	Cts
A B	Section 8 Internal Finishes					
	Prepare,skim,prime and apply one undercoatand two finishing coats of first quality silk vinyl emulsion paint; onPlastered wall surfaces Soffits of suspended slab	78 8	m2 m2			
	To Collection Kshs					
				COLLECTION		
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				Page 14		
	To Summary Kshs					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 9 Main Entrance Gate</b>				Kshs	Cts
	<b>Steel doors</b>					
A	Fabricate and install standard mild steel Single leaf sliding gate at the Main Entrance overall size 5100 x 2400mm high fabricated in 50 x 50 x 3mm mild steel hollow sections and 3 mm thick mild steel plate all smooth welded and primed including fixing to masonry/concrete jambs and head, complete with all fixing accessories; rollers, angle line and iron mongeries all to Architects later Schedule	1	nr			
B	Fabricate and install standard mild steel pedestrian gate overall size 900 x 2400mm high fabricated in 50 x 50 x 3mm mild steel hollow sections and 3 mm thick mild steel plate all smooth welded and primed including fixing to masonry/concrete jambs and head, complete with all fixing accessories and iron mongeries all to Architects later Schedule	1	nr			
	<b>To Summary Kshs</b>					

295B1 KENGEN GATEHOUSE & PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>SUMMARY</b>				Kshs	Cts
	Section 1 Substructure Works (AllProvisional)			Page 4		
	Section 2 Reinforced Concrete SuperstructureSection 3 Walling Section 4 Doors			Page 5		
	Section 5 Windows			Page 6		
	Section 6 Roof and Rainwater DisposalSection 7 External Finishes Section 8 Internal Finishes Section 9 Main Entrance Gate			Page 8 Page 9 Page 11 Page 12 Page 14 Page 15		
	<b>To Summary Kshs</b>					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
	<b>Site Clearance (All Provisional)</b>					
A	Clear designated areas of site of shrubs,bush and small trees, grub up roots, fillwith selected soil and burn debris	2	m2			
	<b>Excavation including maintaining and supporting sides and keeping free fromwater, mud and fallen materials</b>	5	m3			
B	For pits commencing at ground levelnot exceeding 1.50 metres deep					
C	For pits commencing at reduced level	3	m3			
D			m3			
E	1.50 to 3.00 metres deep	3	m3			
	3.00 to 4.50 metres deep	5	m3			
F			m3			
G	Extra over for excavating in (class D) rock		m3			
	<b>Disposal</b>	4	m2			
H	Backfilling to make up levels Backfilling around foundations	4				
	<b>Damp-proof membranes</b>					
I	1000 Gauge polythene laid under surface beds	2				
	<b>Anti-termite treatment</b>					
	Premise 200 SC Chemical or equal and approvedchemical anti-termite treatment executed by an approved specialits under a ten-year guarantee to surfaces of hardcore, etc.(Allowfor treating vertical sides of foundation trenches, column base pits and around building plinth as per manufacturers printed instructions, quantity measured flat)	2	m2			
	<b>To Collection Kshs</b>					



## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
	<b>Plain concrete mix 1:4:8</b>					
A	Blinding under strip foundations, thickness 50 mm	3	m2			
	<b>Vibrated reinforced concrete Class 20/20</b>					
B	Strip foundation	1	m3m2			
C	Beds, thickness 150 mm	2				
D	<b>Deformed high yield ribbed bars reinforcement to BS 4449; cut, bend, hoist and fix as directed : including all necessary tying wires, spacer blocks, templates and spacer stools</b>		kg			
E	8 Diameter bars	44				
F	10 Diameter bars	58	m2			
	<b>Steel mesh fabric reinforcement to B.S.4483</b>					
G	Layer of mesh fabric reinforcement laid in blinding (measured nett - no allowance made for laps) ref. no. A142	2	m			
	<b>Formwork</b>		m2			
H	Edges of beds, etc. sawn timber 75-150 mm high	5				
	<b>Sawn timber formwork</b>		m2			
I	To Sides of strip footing	3				
	<b>Smooth marine board formwork including mould oil applied on the surfaces where necessary</b>					
	Soffits of suspended slab	2				
	<b>To Collection</b>					
	<b>Kshs</b>					

**295B1 KENGEN GATEHOUSE & PTT LATRINE**

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## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine Section 2 Reinforced Concrete Superstructure	Qty	Unit	Rate	Amount	
					Kshs	Cts
A	Vibrated reinforced concrete Class 20/20					
	Beams	1	m3			
	Deformed high yield ribbed bars reinforcement to BS 4449; cut, bend, hoist and fix as directed : including all necessary tying wires, spacer blocks, templates and spacer stools					
	8 Diameter bars	45	kg			
B	12 Diameter bars	55	kg			
C	Smooth marine board formwork including mouldoil applied on the surfaces where necessary					
D	Soffits and sides of beams	3	m2			
To Summary Kshs						

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine Section 3 Walling	Qty	Unit	Rate	Amount	
					Kshs	Cts
A	Machine cut natural stone walling, bedded and jointed in cement sand mortar (1:3), reinforced with 20 gauge x 25mm wide hoopiron reinforcement and column wall ties in every alternate course  200mm thick external walls	11	m2			
	To Summary Kshs					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	Section 4 Doors				Kshs	Cts
A	<b>Flush doors to B.S. 459 (Part 2)</b>  45 mm Semi solid core flush doors faced bothsides with 6 mm interior quality plywood for painting and hardwood lipped all round, size 900 x 2400 mm	1	nr			
B	<b>Doors, frames and finishings in wroughtCypress</b>	6	mm			
C	25mm Quadrant Bead	6	m			
D	Architraves with one labour size, 40 x 25 mm  <b>Wrought Cypress</b>  Frames with 2 labours plugged 150 x 50 mm	6	nrnr			
E	<b>Ironmongery ~ supply and fix with matching screws</b>	2				
F	Pairs heavy duty steel butt hinges 100 mmOval brass ~ floor mounted	1	m m2			
G	<b>Knot, prime, stop and apply two undercoats and one matt finishing coat 'crown' varnishto woodwork</b>	6				
H	Timber surfaces, 200-300 mm girthTimber general surfaces	4				
	<b>To Summary Kshs</b>					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	Section 5 Windows				Kshs	Cts
A	<p>Purpose made steel casement windows manufactured from standard 32mm Z section to B.S.990, complete with handles, hinges, catches and building in lugs and 25x3mm SQS main frames incorporating permanent ventilating units with mosquito gauze, fixed to masonry jambs and concrete heads and cill, with mastic pointing all round</p> <p>Rectangular Window complete with composite horizontal and vertical 25x3mm mild steel burglarproof flat bars along the pane divisions to Architects later detail overall size 600 x 900 mm window type W01</p>	1	nr			
	To Summary				Kshs	

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	Section 6 Roof and Rain Water Disposal				Kshs	Cts
	Roof Covering to approved specialist					
A	Prepainted to an approved colour IT5 Box profile roofing sheets gauge 28, supplied and fixed on mild steel/timber purlins (m.s) with and including self fixing screws; laid with 140mm side laps and a minimum 200mm end laps all to approval	2	m2			
	Structural timber: The following in prime grade, pressure impregnated Sawn Cypress timber with bolted connections including all associated connections, timber packing, ms plates etc to structural engineer's details	6	m			
B	The following in - No. Type T1	4	m			
C	trusses Main rafters size 100 x 50mm	3	m			
D	Main tie as bottom member size 100 x 50mm	7				
E	Struts and ties sizes 75 x 50mm					
	Purlin sizes, 75 x 50 mm					
	To Summary Kshs					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	Section 7 External Finishes				Kshs	Cts
A	<p><b>200mm thick walling in cement sand rendermix 1:3</b></p> <p>Extra fair face and raked horizontal joints and flush pointing to horizontal joints, 10mmdiameter</p>	13	m2			
B	<p><b>Cement and sand 1:4 rendering</b></p> <p>To exterior sides of the masonry and concretefinished with a wood trowel to receive final finish, thickness 15 mm</p>	2	m2			
C	<p><b>Prepare and apply three coats Crown"Permaplast" paint</b></p> <p>Rendered walls externally</p>	2	m2			
	To Summary Kshs					



## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	Section 8 Internal Finishes				Kshs	Cts
	<b>Cement sand plaster mix 1:4</b>					
A	To masonry or concrete surfaces to receive paint (m.s), thickness 25 mm	12	m2			
	<b>Cement and Sand (1:4) beds and backings</b>					
B	Screed on plinth finished with a steel trowel, thickness 25 mm	2	m2			
	<b>Prepare, skim, prime and apply one undercoat and two finishing coats of first quality silk vinyl emulsion paint; on</b>	12	m2			
C	Plastered wall surfaces					
	<b>To Summary Kshs</b>					

295B1 KENGEN GATEHOUSE & PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	SUMMARY				Kshs	Cts
	Section 1 Substructure Works (AllProvisional)			Page 19		
	Section 2 Reinforced Concrete SuperstructureSection 3 Walling			Page 20		
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	Section 6 Roof and Rain Water DisposalSection 7 External Finishes			Page 23		
	Section 8 Internal Finishes			Page 24		
				Page 25		
				Page 26		
	To Summary Kshs					

295B1 KENGEN GATEHOUSE & PIT LATRINE

Item		Qnty	Unit	Rate	Amount	
<div>SUMMARY</div> <div>Gate</div> <div>HousePit</div> <div>Latrine</div> <div>Total Kshs</div>				Page 16	Kshs	Cts
				Page 27		

## SUMMARY PAGE

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFIT SCHEME AT REDHILL				
SUMMARY				
PERIMETER WALL				
	Item			Total Amount
1	PRELIMINARIES			Kshs.
a.	Particular Preliminaries			
b.	General Preliminaries			
2	CONTIGENCIES			5,000,000.00
3	PERIMETER FENCE			
4	GATE HOUSE AND GATES			
5	PIT LATRINE			
6	STATUTORY APPROVAL COSTS			
	TOTAL KSHS. INCLUSIVE OF VAT			

Amount in Word:

Completion period in Weeks .....

Signed :.....

( Employer)

Signed :.....

(Contractor)

Address: .....

Address: .....

Date : .....

Date : .....

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## **PART III ~ CONDITIONS OF CONTRACT AND CONTRACT FORMS**

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## SECTION VIII ~ GENERAL CONDITIONS OF CONTRACT

These General Conditions of Contract (GCC), read in conjunction with the Special Conditions of Contract (SCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The GCC can be used for both smaller admeasurement contracts and lump sum contracts.

### General Conditions of Contract

#### A. General

##### 1. Definitions

1.1 Bold face type is used to identify defined terms.

- a) **The 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.
- b) **The Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.
- c) **The Adjudicator** is the person appointed jointly by the Scheme and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.
- d) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.
- e) **Compensation Events** are those defined in GCC Clause 42 hereunder.
- f) **The Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 53.1.
- g) **The Contract** is the Contract between the Scheme and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.
- h) **The Contractor** is the party whose Bid to carry out the Works has been accepted by the Procuring Entity.
- i) **The Contractor's Bid** is the completed bidding document submitted by the Contractor to the Procuring Entity.
- j) **The Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.
- k) **Days** are calendar days; months are calendar months.
- l) **Day works** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- m) **A Defect** is any part of the Works not completed in accordance with the Contract.
- n) **The Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.
- o) **The Defects Liability Period** is the period **named in the SCC** pursuant to Sub-Clause 34.1 and calculated from the Completion Date.
- p) **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 Scheme in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.
- q) **The Scheme** is the party who employs the Contractor to carry out the Works, **as specified in the SCC**, who is also the Procuring Entity.
- r) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

- s) **“In writing” or “written”** means hand-written, type-written, printed or electronically made, and resulting in a permanent record;
- t) The Initial Contract Price is the Contract Price listed in the Procuring Entity's Letter of Acceptance.
- u) **The Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is **specified in the SCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.
- v) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- w) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.
- x) **The Project Manager** is the person **named in the SCC** (or any other competent person appointed by the Scheme and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.
- y) **SCC** means Special Conditions of Contract.
- z) **The Site** is the area of the works as **defined as such in the SCC**.
- aa) **Site Investigation Reports** are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- bb) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- cc) **The Start Date** is **given in the SCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- dd) **A Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- ee) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- ff) **A Variation** is an instruction given by the Project Manager which varies the Works.
- gg) **The Works** are what the Contract requires the Contractor to construct, install, and turn over to the Procuring Entity, **as defined in the SCC**.

## 2 Interpretation

- 21 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.
- 22 If sectional completion is specified in the SCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 23 The documents forming the Contract shall be interpreted in the following order of priority:
  - a) Agreement,
  - b) Letter of Acceptance,
  - c) Contractor's Bid,
  - d) Special Conditions of Contract,
  - e) General Conditions of Contract, including Appendices,
  - f) Specifications,
  - g) Drawings,
  - h) Bill of Quantities<sup>6</sup>, and
  - i) any other document **listed in the SCC** as forming part of the Contract.

<sup>6</sup>*In lump sum contracts, delete “Bill of Quantities” and replace with “Activity Schedule.”*



### 3. Language and Law

- 3.1 The language of the Contract is English Language and the law governing the Contract are the Laws of Kenya.
- 3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Procuring Entity's Country when
- a) as a matter of law or official regulations, Kenya prohibits commercial relations with that country; or
  - b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Kenya prohibits any import of goods from that country or any payments to any country, person, or entity in that country.

### 4. Project Manager's Decisions

- 4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Scheme and the Contractor in the role representing the Procuring Entity.

### 5. Delegation

- 5.1 Otherwise **specified in the SCC**, the Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.

### 6. Communications

- 6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

### 7. Subcontracting

- 7.1 The Contractor may subcontract with the approval of the Project Manager but may not assign the Contract without the approval of the Scheme in writing. Subcontracting shall not alter the Contractor's obligations.

### 8. Other Contractors

- 8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Scheme between the dates given in the Schedule of Other Contractors, as **referred to in the SCC**. The Contractor shall also provide facilities and services for them as described in the Schedule. The Scheme may modify the Schedule of Other Contractors and shall notify the Contractor of any such modification.

### 9. Personnel and Equipment

- 9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.
- 9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.
- 9.3 If the Procuring Entity, Project Manager or Contractor determines, that any employee of the Contractor be determined to have engaged in Fraud and Corruption during the execution of the Works, then that employee shall be removed in accordance with Clause 9.2 above.

### 10. Procuring Entity's and Contractor's Risks

- 10.1 The Scheme carries the risks which this Contract states are Procuring Entity's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

## 11. Procuring Entity's Risks

- 11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Procuring Entity's risks:
- a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
    - i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
    - ii) negligence, breach of statutory duty, or interference with any legal right by the Scheme or by any person employed by or contracted to him except the Contractor.
  - b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Scheme or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.
- 11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is a Procuring Entity's risk except loss or damage due to
- aa) a Defect which existed on the Completion Date,
  - bb) an event occurring before the Completion Date, which was not itself a Procuring Entity's risk, or
  - cc) the activities of the Contractor on the Site after the Completion Date.

## 12. Contractor's Risks

- 12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Procuring Entity's risks are Contractor's risks.

## 13. Insurance

- 13.1 The Contractor shall provide, in the joint names of the Scheme and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles **stated in the SCC** for the following events which are due to the Contractor's risks:
- a) loss of or damage to the Works, Plant, and Materials.
  - b) loss of or damage to Equipment.
  - c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
  - d) personal injury or death.
- 13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.
- 13.3 If the Contractor does not provide any of the policies and certificates required, the Scheme may effect the insurance which the Contractor should have provided and recover the premiums the Scheme has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 13.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.
- 13.5 Both parties shall comply with any conditions of the insurance policies.

## 14. Site Data

- 14.1 The Contractor shall be deemed to have examined any Site Data **referred to in the SCC**, supplemented by any information available to the Contractor.

## 15. Contractor to Construct the Works

- 15.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

## **16. The Works to Be Completed by the Intended Completion Date**

16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

## **17. Approval by the Project Manager**

17.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.

17.2 The Contractor shall be responsible for design of Temporary Works.

17.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

17.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

17.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

## **18. Safety**

18.1 The Contractor shall be responsible for the safety of all activities on the Site.

## **19. Discoveries**

19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Procuring Entity. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

## **20. Possession of the Site**

20.1 The Scheme shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date **stated in the SCC**, the Scheme shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

## **21. Access to the Site**

21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

## **22. Instructions, Inspections and Audits**

22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.

22.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and sub-consultants to keep, accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.

22.3 The Contractor shall permit and shall cause its subcontractors and sub-consultants to permit, the Scheme and/or persons appointed by the Public Procurement Regulatory Authority to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Public Procurement Regulatory Authority. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 25.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Public Procurement Regulatory Authority's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Public Procurement Regulatory Authority's prevailing sanctions procedures).

## 23. Appointment of the Adjudicator

- 23.1 The Adjudicator shall be appointed jointly by the Scheme and the Contractor, at the time of the Procuring Entity's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Scheme does not agree on the appointment of the Adjudicator, the Scheme will request the Appointing Authority designated in the SCC, to appoint the Adjudicator within 14 days of receipt of such request.
- 23.2 Should the Adjudicator resign or die, or should the Scheme and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Scheme and the Contractor. In case of disagreement between the Scheme and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the SCC at the request of either party, within 14 days of receipt of such request.

## 24. Settlement of Claims and Disputes

### 24.1 Contractor's Claims

- 24.1.1 If the Contractor considers itself 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 Project Manager, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 30 days after the Contractor became aware, or should have become aware, of the event or circumstance.
- 24.1.2 If the Contractor fails to give notice of a claim within such period of 30 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Scheme shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub- Clause shall apply.
- 24.1.3 The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.
- 24.1.4 The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Project Manager. Without admitting the Procuring Entity's liability, the Project Manager 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 Project Manager to inspect all these records, and shall (if instructed) submit copies to the Project Manager.
- 24.1.5 Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Project Manager, the Contractor shall send to the Project Manager 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 Project Manager may reasonably require; and
  - c) the Contractor shall send a final claim within 30 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 Project Manager.
- 24.1.6 Within 42 days after receiving a Notice of a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Project Manager and approved by the Contractor, the Project Manager 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.
- 24.1.7 Within the above defined period of 42 days, the Project Manager shall proceed in accordance with Sub-Clause
- 24.1.8 [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.
- 24.1.9 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.

24.1.10 If the Project Manager does not respond within the timeframe defined in this Clause, either Party may consider that the claim is rejected by the Project Manager and any of the Parties may refer to Arbitration in accordance with Sub-Clause 24.4 [Arbitration].

24.1.11 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 24.3.

## **242 Amicable Settlement**

24.2.1 Where a notice of a claim has been given, 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 a claim in accordance with Sub-Clause 24.1 above should move to commence arbitration after the fifty-sixth day from the day on which a notice of a claim was given, even if no attempt at an amicable settlement has been made.

## **243 Matters that may be referred to arbitration**

24.3.1 Notwithstanding anything stated herein the following matters may be referred to arbitration before the practical completion of the Works or abandonment of the Works or termination of the Contract by either party:

- a) The appointment of a replacement Project Manager upon the said person ceasing to act.
- b) Whether or not the issue of an instruction by the Project Manager is empowered by these Conditions.
- c) Whether or not a certificate has been improperly withheld or is not in accordance with these Conditions.
- e) Any dispute arising in respect of war risks or war damage.
- f) All other matters shall only be referred to arbitration after the completion or alleged completion of the Works or termination or alleged termination of the Contract, unless the Scheme and the Contractor agree otherwise in writing.

## **244 Arbitration**

24.4.1 Any claim or dispute between the Parties arising out of or in connection with the Contract not settled amicably in accordance with Sub-Clause 24.3 shall be finally settled by arbitration.

24.4.2 No arbitration proceedings shall be commenced on any claim or dispute where notice of a claim or dispute has not been given by the applying party within ninety days of the occurrence or discovery of the matter or issue giving rise to the dispute.

24.4.3 Notwithstanding the issue of a notice as stated above, the arbitration of such a claim or dispute shall not commence unless an attempt has in the first instance been made by the parties to settle such claim or dispute amicably with or without the assistance of third parties. Proof of such attempt shall be required.

24.4.4 The Arbitrator shall, without prejudice to the generality of his powers, have powers to direct such measurements, computations, tests or valuations as may in his opinion be desirable in order to determine the rights of the parties and assess and award any sums which ought to have been the subject of or included in any certificate.

24.4.5 The Arbitrator shall, without prejudice to the generality of his powers, have powers to open up, review and revise any certificate, opinion, decision, requirement or notice and to determine all matters in dispute which shall be submitted to him in the same manner as if no such certificate, opinion, decision requirement or notice had been given.

24.4.6 The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Project Manager, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Project Manager from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.

24.4.7 Neither Party shall be limited in the proceedings before the arbitrators to the evidence, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.

24.4.8 Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, and the Project Manager shall not be altered by reason of any arbitration being conducted during the progress of the Works.

24.4.9 The terms of the remuneration of each or all the members of Arbitration 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.

## **245 Arbitration with National Contractors**

24.5.1 If the Contract is with national contractors, arbitration proceedings will be conducted in accordance with



~~the Arbitration Laws of Kenya. In case of any claim or dispute, such claim or dispute shall be notified in writing~~ by either party to the other with a request to submit it to arbitration and to concur in the appointment of an Arbitrator within thirty days of the notice. The dispute shall be referred to the arbitration and final decision of a person to be agreed between the parties. Failing agreement to concur in the appointment of an Arbitrator, the Arbitrator shall be appointed, on the request of the applying party, by the Chairman or Vice Chairman of any of the following professional institutions;

- i) Architectural Association of Kenya
- ii) Institute of Quantity Surveyors of Kenya
- iii) Association of Consulting Engineers of Kenya
- iv) Chartered Institute of Arbitrators (Kenya Branch)
- v) Institution of Engineers of Kenya

24.5.2 The institution written to first by the aggrieved party shall take precedence over all other institutions.

#### **246 Alternative Arbitration Proceedings**

24.6.1 Alternatively, the Parties may refer the matter to the Nairobi Centre for International Arbitration (NCIA) which offers a neutral venue for the conduct of national and international arbitration with commitment to providing institutional support to the arbitral process.

#### **247 Failure to Comply with Arbitrator's Decision**

24.7.1 The award of such Arbitrator shall be final and binding upon the parties.

24.7.2 In the event that a Party fails to comply with a final and binding Arbitrator's decision, then the other Party may, without prejudice to any other rights it may have, refer the matter to a competent court of law.

#### **248 Contract operations to continue**

24.8.1 Notwithstanding any reference to arbitration herein,

- a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- b) the Scheme shall pay the Contractor any monies due the Contractor.

### **25. Fraud and Corruption**

25.1 The Government requires compliance with the country's Anti-Corruption laws and its prevailing sanctions policies and procedures as set forth in the Constitution of Kenya and its Statutes.

25.2 The Scheme requires the Contractor to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

## **B. Time Control**

### **26. Program**

26.1 Within the time stated in the SCC, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.

26.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

26.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.

26.4 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

## **27. Extension of the Intended Completion Date**

- 27.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
- 27.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

## **28. Acceleration**

- 28.1 When the Scheme wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Scheme accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Scheme and the Contractor.
- 28.2 If the Contractor's priced proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

## **29. Delays Ordered by the Project Manager**

- 29.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

## **30. Management Meetings**

- 30.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 30.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Procuring Entity. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

## **31. Early Warning**

- 31.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- 31.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

## **C. Quality Control**

### **32. Identifying Defects**

- 32.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

### **33. Tests**

- 33.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

### **34. Correction of Defects**

- 34.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 34.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

### **35. Uncorrected Defects**

- 35.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

## **D. Cost Control**

### **36. Contract Price<sup>7</sup>**

- 36.1 The Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.

### **37. Changes in the Contract Price<sup>8</sup>**

- 37.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change. The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Procuring Entity.
- 37.2 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

### **38. Variations**

- 38.1 All Variations shall be included in updated Programs<sup>9</sup> produced by the Contractor.
- 38.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.
- 38.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.
- 38.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
-



- 385 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning
- 386 If the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 39.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work
- 387 Value Engineering: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following.
- the proposed change(s), and a description of the difference to the existing contract requirements.
  - a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Scheme may incur in implementing the value engineering proposal; and
  - a description of any effect(s) of the change on performance/functionality.
- 388 The Scheme may accept the value engineering proposal if the proposal demonstrates benefits that:
- accelerate the contract completion period; or
  - reduce the Contract Price or the life cycle costs to the Procuring Entity; or
  - improve the quality, efficiency, safety or sustainability of the Facilities; or
  - yield any other benefits to the Procuring Entity, without compromising the functionality of the Works.
- 389 If the value engineering proposal is approved by the Scheme and results in:
- a reduction of the Contract Price; the amount to be paid to the Contractor shall be the **percentage specified in the SCC** of the reduction in the Contract Price; or
  - an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in (a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price.

### 39. Cash Flow Forecasts

- 39.1 When the Program<sup>11</sup>, is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

### 40. Payment Certificates

- 40.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
- 40.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 40.3 The value of work executed shall be determined by the Project Manager.
- 40.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed<sup>12</sup>.
- 40.5 The value of work executed shall include the valuation of Variations and Compensation Events.
- 40.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- 40.7 Where the contract price is different from the corrected tender price, in order to ensure the contractor is not paid less or more relative to the contract price (which would be the tender price), payment valuation certificates and variation orders on omissions and additions valued based on rates in the Bill of Quantities or schedule of rates in the Tender, will be adjusted by a plus or minus percentage. The percentage already worked out during tender evaluation is worked out as follows:  $(\text{corrected tender price} - \text{tender price}) / \text{tender price} \times 100$ .

## **41. Payments**

- 41.1 Payments shall be adjusted for deductions for advance payments and retention. The Scheme shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of each certificate. If the Scheme makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.
- 41.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 41.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.
- 41.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Scheme and shall be deemed covered by other rates and prices in the Contract.

## **42. Compensation Events**

42.1 The following shall be Compensation Events:

- d) The Scheme does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1.
- e) The Scheme modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.
- f) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
- g) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
- h) The Project Manager unreasonably does not approve a subcontract to be let.
- i) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
- j) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Procuring Entity, or additional work required for safety or other reasons.
- k) Other contractors, public authorities, utilities, or the Scheme does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- l) The advance payment is delayed.
- m) The effects on the Contractor of any of the Procuring Entity's Risks.
- n) The Project Manager unreasonably delays issuing a Certificate of Completion.

42.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

42.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

424 The Contractor shall not be entitled to compensation to the extent that the Procuring Entity's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

#### 43. Tax

43.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 30 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44.

#### 44. Currency of Payment

44.1 All payments under the contract shall be made in Kenya Shillings

#### 45. Price Adjustment

45.1 Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the SCC**. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type specified below applies:

$$P = A + B I_m / I_o$$

where:

the Contract Price payable.

P is the adjustment factor for the portion of

A and B are coefficients<sup>13</sup> **specified in the SCC**, representing the non-adjustable and adjustable portions, respectively, of the Contract Price payable and  $I_m$  is the index prevailing at the end of the month being invoiced and  $I_o$  is the index prevailing 30 days before Bid opening for inputs payable.

45.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected, and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

#### 46. Retention

46.1 The Scheme shall retain from each payment due to the Contractor the proportion stated in the **SCC** until Completion of the whole of the Works.

46.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 53.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed, and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" Bank guarantee.

#### 47. Liquidated Damages

47.1 The Contractor shall pay liquidated damages to the Scheme at the rate per day stated in the **SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the SCC. The Scheme may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 41.1.

#### 48. Bonus

48.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day **stated in the SCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

#### 49. Advance Payment

49.1 The Scheme shall make advance payment to the Contractor of the amounts stated in the **SCC** by the date stated in the **SCC**, against provision by the Contractor of an Unconditional Bank Guarantee in a form and

by a bank acceptable to the Scheme in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

492 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

493 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

## **50. Securities**

50.1 The Performance Security shall be provided to the Scheme no later than the date specified in the Letter of Acceptance and shall be issued in an amount **specified in the SCC**, by a bank or surety acceptable to the Procuring Entity and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 day from the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year from the date of issue of the Completion Certificate in the case of a Performance Bond.

## **51. Dayworks**

51.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

51.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.

51.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

## **52. Cost of Repairs**

52.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

## **E. Finishing the Contract**

## **53. Completion**

53.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the whole of the Works is completed.

## **54. Taking Over**

54.1 The Scheme shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

## **55. Final Account**

55.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.

## **56. Operating and Maintenance Manuals**

56.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the SCC.

56.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the SCC pursuant to GCC Sub-Clause 56.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the SCC** from payments due to the Contractor.

## **57. Termination**

57.1 The Scheme or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

57.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
- b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
- c) the Scheme or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- d) a payment certified by the Project Manager is not paid by the Scheme to the Contractor within 84 days of the date of the Project Manager's certificate;
- e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- f) the Contractor does not maintain a Security, which is required;
- g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as **defined in the SCC**; or
- h) if the Contractor, in the judgment of the Scheme has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix A to the GCC, in competing for or in executing the Contract, then the Scheme may, after giving fourteen (14) days written notice to the Contractor, terminate the Contract and expel him from the Site.

57.3 Notwithstanding the above, the Scheme may terminate the Contract for convenience.

57.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

57.5 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

## **58. Payment upon Termination**

58.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as specified in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the Scheme exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.

58.2 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

## **59. Property**

59.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Scheme if the Contract is terminated because of the Contractor's default.

## **60. Release from Performance**

60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Scheme or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.



## SECTION IX - SPECIAL CONDITIONS OF CONTRACT

*Except where otherwise specified, all Special Conditions of Contract should be filled in by the Scheme prior to issuance of the bidding document. Schedules and reports to be provided by the Scheme should be annexed.*

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
<b>A. General</b>	
GCC 1.1 (q)	KenGen Defined Contribution (DC) 2012
GCC 1.1 (z)	The Site is located at <i>Redhill – Kiambu County</i>
GCC 1.1 (cc)	The Start Date shall be <i>after contract signing</i>
GCC 1.1 (gg)	The Works consist of <i>[insert brief summary, including relationship to other contracts under the Project]</i> .
GCC 2.2	Sectional Completions are: <i>[insert nature and dates, if appropriate]</i>
GCC 5.1	The Project manager <i>may</i> delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other contractors: <i>[insert Schedule of Other Contractors, if appropriate]</i>
GCC 9.1	<p><b>Key Personnel</b> GCC 9.1 is replaced with the following:</p> <p>9.1 Key Personnel are the Contractor's personnel named in this GCC 9.1 of the Special Conditions of Contract. The Contractor shall employ the Key Personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of Key Personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.</p> <p><i>[insert the name/s of each Key Personnel agreed by the Scheme prior to Contract signature.]</i></p>
GCC 13.1	<p>The minimum insurance amounts and deductibles shall be:</p> <ul style="list-style-type: none"> <li>(a) for loss or damage to the Works, Plant and Materials: <i>[insert amounts]</i>.</li> <li>(b) For loss or damage to Equipment: <i>[insert amounts]</i>.</li> <li>(c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract <i>[insert amounts]</i>.</li> <li>(d) for personal injury or death: <ul style="list-style-type: none"> <li>(i) of the Contractor's employees: <i>[amount]</i>.</li> <li>(ii) of other people: <i>[amount]</i>.</li> </ul> </li> </ul>
GCC 14.1	Site Data are: <i>[list Site Data]</i>
GCC 20.1	The Site Possession Date(s) shall be: <i>After contract signing</i>
GCC 23.1 & GCC 23.2	Appointing Authority for the Adjudicator: N/A
<b>B. Time Control</b>	
GCC 26.1	The Contractor shall submit for approval a Program for the Works within <i>[number]</i> days from the date of the Letter of Acceptance.
GCC 26.3	The period between Program updates is <i>[insert number]</i> days.

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	The amount to be withheld for late submission of an updated Program is <i>[insert amount]</i> .
<b>C. Quality Control</b>	
GCC 34.1	The Defects Liability Period is 181 days.
<b>D. Cost Control</b>	
GCC 38.9	If the value engineering proposal is approved by the Scheme the amount to be paid to the Contractor shall be ____% <i>(insert appropriate percentage. The percentage is normally up to 50%)</i> of the reduction in the Contract Price.
GCC 44.1	The currency of the Procuring Entity's Country is: <i>Kenyan Shillings</i>
GCC 45.1	The Contract <i>is not</i> subject to price adjustment in accordance with GCC Clause 45, and the following information regarding coefficients <i>[specify "does" or "does not"]</i> apply.
GCC 46.1	The proportion of payments retained is: <i>5% of the contract value.</i>
GCC 48.1	The Bonus for the whole of the Works is <i>[insert percentage of final Contract Price]</i> per day. The maximum amount of Bonus for the whole of the Works is <i>[insert percentage]</i> of the final Contract Price. Not applicable
GCC 49.1	The Advance Payments shall be: <i>[insert amount(s)]</i> and shall be paid to the Contractor no later than <i>[insert date(s)]</i> .
GCC 50.1	<p>The Performance Security amount is <i>[insert amount(s) denominated in the types and proportions of the currencies in which the Contract Price is payable, or in a freely convertible currency acceptable to the Procuring Entity]</i></p> <p>(a) Performance Security – Bank Guarantee: in the amount(s) of <i>[insert related figure(s)]</i> percent of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount.</p> <p>(b) Performance Security – Performance Bond: in the amount(s) of <i>[insert related figure(s)]</i> percent of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount.</p>
<b>E. Finishing the Contract</b>	
GCC 56.1	<p>The date by which operating, and maintenance manuals are required is <i>[insert date]</i>.</p> <p>The date by which “as built” drawings are required is <i>[insert date]</i>.</p>
GCC 56.2	The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is <i>[insert amount in local currency]</i> .
GCC 57.2 (g)	The maximum number of days is: <i>[insert number; consistent with Clause 47.1 on liquidated damages]</i> .
GCC 58.1	The percentage to apply to the value of the work not completed, representing the Procuring Entity's additional cost for completing the Works, is <i>[insert percentage]</i> .

## **FORM No 1: NOTIFICATION OF INTENTION TO AWARD**

This Notification of Intention to Award shall be sent to each Tenderer that submitted a Tender. Send this Notification to the Tenderer's Authorized Representative named in the Tender Information Form on the format below.

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### **FORMAT**

1. For the attention of Tenderer's Authorized Representative

- i) Name: *[insert Authorized Representative's name]*
- ii) Address: *[insert Authorized Representative's Address]*
- iii) Telephone: *[insert Authorized Representative's telephone/fax numbers]*
- iv) Email Address: *[insert Authorized Representative's email address]*

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

2. Date of transmission: *[email]* on *[date]* (local time)

This Notification is sent by *(Name and designation)* \_\_\_\_\_

3. Notification of Intention to Award

- i) Procuring Entity: *[insert the name of the Procuring Entity]*
- ii) Project: *[insert name of project]*
- iii) Contract title: *[insert the name of the contract]*
- iv) Country: *[insert country where ITT is issued]*
- v) ITT No: *[insert ITT reference number from Procurement Plan]*

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

4. Request a debriefing in relation to the evaluation of your tender

Submit a Procurement-related Complaint in relation to the decision to award the contract.

a) The successful tenderer

i) Name of successful Tender \_\_\_\_\_

ii) Address of the successful Tender \_\_\_\_\_

iii) Contract price of the successful Tender Kenya Shillings \_\_\_\_\_ (in words \_\_\_\_\_)

b) Other Tenderers

Names of all Tenderers that submitted a Tender. If the Tender's price was evaluated include the evaluated price as well as the Tender price as read out. For Tenders not evaluated, give one main reason the Tender was unsuccessful.



SNo	Name of Tender	Tender Price as read out	Tender's evaluated price (Note a)	One Reason Why not Evaluated
1				
2				
3				
4				
5				

(Note a) State NE if not evaluated

#### 5. How to request a debriefing

- a) DEADLINE: The deadline to request a debriefing expires at midnight on [*insert date*] (*local time*).
- b) You may request a debriefing in relation to the results of the evaluation of your Tender. If you decide to request a debriefing your written request must be made within three (5) Business Days of receipt of this Notification of Intention to Award.
- c) Provide the contract name, reference number, name of the Tenderer, contact details; and address the request for debriefing as follows:
  - i) Attention: [*insert full name of person, if applicable*]
  - ii) Title/position: [*insert title/position*]
  - ii) Agency: [*insert name of Procuring Entity*]
  - iii) Email address: [*insert email address*]
- d) If your request for a debriefing is received within the 3 Days deadline, we will provide the debriefing within five (3) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (3) Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.
- e) The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.
- f) If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Days from the date of publication of the Contract Award Notice.

#### 6. How to make a complaint

- a) Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [*insert date*] (*local time*).
- b) Provide the contract name, reference number, name of the Tenderer, contact details; and address the Procurement-related Complaint as follows:
  - i) Attention: [*insert full name of person, if applicable*]
  - ii) Title/position: [*insert title/position*]
  - iii) Agency: [*insert name of Procuring Entity*]
  - iv) Email address: [*insert email address*]
- c) At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.
- d) Further information: For more information refer to the Public Procurement and Disposals Act 2015 and its Regulations available from the Website [info@ppra.go.ke](mailto:info@ppra.go.ke) or [complaints@ppra.go.ke](mailto:complaints@ppra.go.ke). You should read these documents before preparing and submitting your complaint.
- e) There are four essential requirements:
  - i) You must be an 'interested party'. In this case, that means a Tenderer who submitted a Tender in this tendering process and is the recipient of a Notification of Intention to Award.
  - ii) The complaint can only challenge the decision to award the contract.
  - iii) You must submit the complaint within the period stated above.

~~iv) You must include, in your complaint, all of the information required to support your complaint.~~

7. Standstill Period

- i) DEADLINE: The Standstill Period is due to end at midnight on [*insert date*] (local time).
- ii) The Standstill Period lasts ten (14) Days after the date of transmission of this Notification of Intention to Award.
- iii) The Standstill Period may be extended as stated in paragraph Section 5 (d) above.

If you have any questions regarding this Notification please do not hesitate to contact us. On behalf of the Procuring Entity:

Signature: \_\_\_\_\_ Name: \_\_\_\_\_

Title/position: \_\_\_\_\_ Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

**FORM NO. 2 ~ REQUEST FOR REVIEW**

**FORM FOR REVIEW (r.203(1))**

**PUBLIC PROCUREMENT ADMINISTRATIVE REVIEW BOARD**

**APPLICATION NO..... OF.....20.....**

**BETWEEN**

**..... APPLICANT**

**AND**

**.....RESPONDENT (Procuring Entity)**

Request for review of the decision of the..... (Name of the Scheme of .....dated the...day of .....20.....in the matter of Tender No.....of .....20..... for .....(Tender description).

**REQUEST FOR REVIEW**

I/We.....,the above named Applicant(s), of address: Physical address.....P. O. Box No..... Tel. No.....Email ....., hereby request the Public Procurement Administrative Review Board to review the whole/part of the above mentioned decision on the following grounds , namely:

- 1.
- 2.

By this memorandum, the Applicant requests the Board for an order/orders that:

- 1.
- 2.

SIGNED .....(Applicant) Dated on.....day of ...../ ...20.....

---

FOR OFFICIAL USE ONLY Lodged with the Secretary Public Procurement Administrative Review Board on.....day of .....20.....

**SIGNED**

**Board Secretary**

**FORM NO 3: LETTER OF AWARD**

*[letterhead paper of the Procuring Entity] [date]*

To: *[name and address of the Contractor]*

This is to notify you that your Tender dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Tenderers, is hereby accepted by ..... (*name of Procuring Entity*).

You are requested to furnish the Performance Security within 30 days in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms included in Section VIII, Contract Forms, of the Tender Document.

Authorized Signature: .....

Name and Title of Signatory: .....

Name of Procuring Entity.....

Attachment: *Contract Agreement*.....

## FORM NO 4: CONTRACT AGREEMENT

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, between \_\_\_\_\_ of \_\_\_\_\_ (hereinafter “the Procuring Entity”), of the one part, and \_\_\_\_\_ of \_\_\_\_\_ (hereinafter “the Contractor”), of the other part:

WHEREAS the Scheme desires that the Works known as \_\_\_\_\_ should be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Scheme 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.
  - a) the Letter of Acceptance
  - b) the Letter of Tender
  - c) the addenda Nos \_\_\_\_\_ (if any)
  - d) the Special Conditions of Contract
  - e) the General Conditions of Contract;
  - f) the Specifications
  - g) the Drawings; and
  - h) the completed Schedules and any other documents forming part of the contract.
3. In consideration of the payments to be made by the Scheme to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Scheme to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Scheme hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the Laws of Kenya on the day, month and year specified above.

Signed and sealed by \_\_\_\_\_ (for the Procuring Entity)

Signed and sealed by \_\_\_\_\_ (for the Contractor).

## **FORM NO. 5 ~ PERFORMANCE SECURITY**

### **[Option 1 ~ Unconditional Demand Bank Guarantee]**

*[Guarantor letterhead]*

**Beneficiary:** \_\_\_\_\_ *[insert name and Address of Procuring Entity / Date:* \_\_\_\_\_

\_\_\_\_\_ *[Insert date of issue]*

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that \_\_\_\_\_ (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ dated \_\_\_\_\_ with (name of Procuring Entity) \_\_\_\_\_ (the Scheme as the Beneficiary), for the execution of \_\_\_\_\_ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_\_ (in words),<sup>1</sup> such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.
4. This guarantee shall expire, no later than the .... Day of ....., 2.....<sup>2</sup>, and any demand for payment under it must be received by us at the office indicated above on or before that date.
5. 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."

*[Name of Authorized Official, signature(s) and seals/stamps].*

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

<sup>1</sup> The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency of the Contract or a freely convertible currency acceptable to the Beneficiary.

<sup>2</sup> Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Scheme should note that in the event of an extension of this date for completion of the Contract, the Scheme 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.

## **FORM No. 6 ~ PERFORMANCE SECURITY**

### **[Option 2– Performance Bond]**

*[Note: Procuring Entities are advised to use Performance Security – Unconditional Demand Bank Guarantee instead of Performance Bond due to difficulties involved in calling Bond holder to action]*

*[Guarantor letterhead or SWIFT identifier code]*

**Beneficiary:** \_\_\_\_\_ *[insert name and Address of Procuring Entity /*  
\_\_\_\_\_ *Date: ]*  
\_\_\_\_\_ *[Insert date of issue].*

**PERFORMANCE BOND No.:** \_\_\_\_\_

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. By this Bond \_\_\_\_\_ as Principal (hereinafter called “the Contractor”) and \_\_\_\_\_ as Surety (hereinafter called “the Surety”), are held and firmly bound unto \_\_\_\_\_ as Obligee (hereinafter called “the Procuring Entity”) in the amount of \_\_\_\_\_ for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
2. WHEREAS the Contractor has entered into a written Agreement with the Scheme dated the \_\_\_\_\_ day of \_\_\_\_\_, 20 , for \_\_\_\_\_ in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.
3. NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Scheme to be, in default under the Contract, the Scheme having performed the Procuring Entity's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:
  - 1) complete the Contract in accordance with its terms and conditions; or
  - 2) obtain a tender or tenders from qualified tenderers for submission to the Scheme for completing the Contract in accordance with its terms and conditions, and upon determination by the Scheme and the Surety of the lowest responsive Tenderers, arrange for a Contract between such Tenderer, and Scheme and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term “Balance of the Contract Price,” as used in this paragraph, shall mean the total amount payable by Scheme to Contractor under the Contract, less the amount properly paid by Scheme to Contractor; or
  - 3) pay the Scheme the amount required by Scheme to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.
4. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.
5. Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate. No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Scheme named herein or the heirs, executors, administrators, successors, and assigns of the Procuring Entity.
6. In testimony whereof, the Contractor has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this day \_\_\_\_\_ of \_\_\_\_\_ 20 \_\_\_\_\_.

SIGNED ON \_\_\_\_\_ on behalf of By \_\_\_\_ in the capacity of In the  
presence of

SIGNED ON \_\_\_\_\_ on behalf of By \_\_\_\_ in the capacity of In the  
presence of



**FORM NO. 7 - ADVANCE PAYMENT SECURITY**

**[Demand Bank Guarantee]**

*[Guarantor letterhead]*

**Beneficiary:** \_\_\_\_\_ *[Insert name and Address of Procuring Entity]*

**Date:** \_\_\_\_\_ *[Insert date of issue]*

**ADVANCE PAYMENT GUARANTEE No.:** \_\_\_\_\_ *[Insert guarantee reference number]* **Guarantor:** \_\_\_\_\_ *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. We have been informed that \_\_\_\_\_ (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ dated \_\_\_\_\_ with the Beneficiary, for the execution of \_\_\_\_\_ (hereinafter called "the Contract").
2. Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum \_\_\_\_\_ *(in words)* is to be made against an advance payment guarantee.
3. At the request of the Contractor, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of \_\_\_\_\_ *(in words)*<sup>1</sup> upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:
  - 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 Applicant has failed to repay.
4. 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 Contractor on its account number \_\_\_\_\_ at \_\_\_\_\_.
5. The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor 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<sup>nd</sup>,<sup>2</sup> whichever is earlier. Consequently, demand for payment under this guarantee must be received by us at this office on or before that date.
6. 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.

*[Name of Authorized Official, signature(s) and seals/stamps]*

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

<sup>1</sup> The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency of the advance payment as specified in the Contract.

<sup>2</sup> Insert the expected expiration date of the Time for Completion. The Scheme should note that in the event of an extension of the time for completion of the Contract, the Scheme 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.

## FORM NO. 8 - RETENTION MONEY SECURITY

### [Demand Bank Guarantee]

*[Guarantor letterhead]*

**Beneficiary:** \_\_\_\_\_ *[Insert name and Address of Procuring Entity]*

**Date:** \_\_\_\_\_ *[Insert date of issue]*

**Advance payment guarantee no.** *[Insert guarantee reference number]*

**Guarantor:** *[Insert name and address of place of issue, unless indicated in the letterhead]*

1. 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 Contractor") 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").
2. 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, and payment of *[insert the second half of the Retention Money]* is to be made against a Retention Money guarantee.
3. At the request of the Contractor, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* \_\_\_\_\_ *([insert amount in words])* upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor 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.
4. 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 Contractor on its account number \_\_\_\_\_ at \_\_\_\_\_ *[insert name and address of Applicant's bank]*.
5. This guarantee shall expire no later than the ..... Day of ....., 2.....<sup>2</sup>, and any demand for payment under it must be received by us at the office indicated above on or before that date.
6. 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.

*[Name of Authorized Official, signature(s) and seals/stamps]*

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

<sup>1</sup>The Guarantor shall insert an amount representing the amount of the second half of the Retention Money.

<sup>2</sup>Insert a date that is twenty-eight days after the expiry of retention period after the actual completion date of the contract. The Scheme should note that in the event of an extension of this date for completion of the Contract, the Scheme 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.

**FORM NO. 9 BENEFICIAL OWNERSHIP DISCLOSURE FORM****INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM**

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

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

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

Tender Reference No.: \_\_\_\_\_ [insert identification no]

Name of the Assignment: \_\_\_\_\_ [insert name of the assignment] to:  
 \_\_\_\_\_ [insert complete name of Procuring Entity]

In response to your notification of award dated \_\_\_\_\_ [insert date of notification of award] to furnish additional information on beneficial ownership: \_\_\_\_\_ [select one option as applicable and delete the options that are not applicable]

I) We here by provide the following beneficial ownership information.

**Details of beneficial ownership**

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

OR

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

OR

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

*Directly or indirectly holding 25% or more of the shares. Directly or indirectly holding 25% or more of the voting rights.*

*Directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Tenderer]”*

*Name of the Tenderer: .....\*[insert complete name of the Tenderer]\_\_\_\_\_*

*Name of the person duly authorized to sign the Tender on behalf of the Tenderer: \*\* [insert complete name of person duly authorized to sign the Tender]*

*Title of the person signing the Tender: ..... [insert complete title of the person signing the Tender]*

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

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





## **BILL OF QUANTITIES**

**PROCURING ENTITY: KenGen DEFINED CONTRIBUTION (DC) SCHEME**

<b>TENDER NUMBER</b>	<b>KenGenSRBS/T015/2022</b>
<b>TENDER DESCRIPTION</b>	<b>PROPOSED CONSTRUCTION OF A PERIMETER WALL ON SCHEME'S REDHILL LAND</b>
<b>PROCUREMENT METHOD</b>	<b>OPEN TENDERING</b>
<b>INVITATION DATE</b>	<b>12<sup>TH</sup> OCTOBER, 2022</b>
<b>SUBMISSION DATE</b>	<b>31<sup>ST</sup> OCTOBER 2022 AT 10:30 AM</b>

The Trust Secretary,  
KenGen Staff Retirement Benefits Scheme,  
P.O BOX 47936 – 000100,  
KenGen Pension Plaza 2, 11<sup>th</sup> Floor,  
Kolobot Road, Parklands.  
Nairobi. Tel No: 0711036286  
/0711036932.  
EMAIL: [tenders@kengensrbs.co.ke](mailto:tenders@kengensrbs.co.ke)

OCTOBER 2022.

ALL CANDIDATES ARE ADVISED TO READ CAREFULLY THIS TENDER DOCUMENT IN ITS ENTIRETY BEFORE MAKING ANY BID.

## GENERAL SPECIFICATIONS

## **GENERAL DESCRIPTION OF MATERIALS AND**

The following apply to all Sections hereafter.

### **A. ALTERATIONS, ADDITIONS AND EXTENSIONS**

In alterations or extensions to existing buildings and/or external works, new work is to match up in all respects to the existing work unless otherwise specified, shown on the Drawings or approved before-hand by the Architect.

## **QUALITY, SAMPLES, TESTING AND APPROVAL**

### **B. MATERIALS**

Materials, commodities, components and equipment are to be new and unused unless otherwise specified. Handle, store, fix and protect all commodities with care to ensure that they are in perfect condition when incorporated into the work and handed over on completion.

### **C. MANUFACTURER'S RECOMMENDATIONS**

Handle, store and fix every commodity strictly in accordance with the printed or written recommendations of the manufacturer and/or supplier. Supply the Architect with copies of manufacturers' recommendations. Inform the Architect if the manufacturers' recommendations conflict with any other specified requirements, and obtain his instructions before proceeding.

### **D. STANDARDS**

Where commodities or workmanship are specified by reference to British Standards (B.S.) or Codes of Practice (C.P.) or International (I.S.O.) or other Standards, such standards are deemed to be the latest published at the time of tendering. The Contractor will be deemed to have read and understood the standards specified, and no claim for want of knowledge will be allowed. The substitution of commodities or standards of workmanship complying with other standards may be allowed at the discretion of the Architect, but application for permission for such substitution must be made in writing in sufficient time to allow adequate investigation. Obtain Certificates of Compliance with standards and supply to the Architect on request.

### **E. LOCAL CONDITIONS**

All materials, commodities, components and equipment must be suitable for use in tropical climates

### **F. SAMPLES**

Where samples of commodities or specimens of finished work are specified, submit samples or specimens to the Architect and obtain his approval before confirming orders or carrying out the work. Retain approved samples and specimens on Site for comparison with the finished work. Finished work must conform in all respects with the samples or specimens approved. Remove samples and specimens when no longer required. The cost of supplying samples and specimens must be borne by the Contractor, but specimens may form part of the finished work where approved by the Architect.



## GENERAL DESCRIPTIONS OF MATERIALS AND WORKMANSHIP

The following apply to all Sections hereinafter

### DEMOLITIONS AND ALTERATIONS

#### A. GENERALLY

The Contractor **is required to visit the existing buildings** and ascertain for himself the nature of the Works and no claim arising from lack of knowledge in this respect will be entertained. The dimensions and quantities given in this section are approximate and the Contractor is referred to the Site to ascertain the exact nature and extent of the Works.

The items of pulling down and alterations are to include for both labour and materials and for any shoring, needling and strutting and temporary works in connection therewith. The Contractor must allow in his pricing for making good all works disturbed in all trades and for carting away all rubbish.

The Contractor must give all the necessary notices and must exercise due care in the demolitions. He must not collapse large sections of walls, floors, etc., and must provide all necessary shoring and supports during the demolitions.

During demolition works the Contractor shall keep the debris constantly watered to minimise the dust arising and this shall be included in his prices.

All materials arising from the demolitions, unless **specifically stated otherwise**, are to become the property of the Contractor and any credit allowed for the value of such materials shall be shown in the space provided.

All materials, including rubbish, shall be removed from the Site as soon as possible.

The Contractor is to erect dust-proof screens to the approval of the Architect where deemed necessary and to remove them on completion of the work, all to the Architect's satisfaction.

#### B. INTERPRETATION OF TERMS

"Demolish" shall be deemed to mean cutting away, breaking up, demolishing, pulling down, taking down, removing, etc., as the context requires and shall include in all cases temporarily strutting and supporting and making good remaining work as necessary, and clearing away and removing from Site all debris, etc.

"Remove" shall mean taking down, hacking up, breaking down, removing etc., and clearing away from Site and all other expenses thereby entailed.

"Make good" shall be deemed to mean all making good, fitting, facing up, plastering, paving, repairing and painting to match and jointing to remaining existing work.

To "match" shall mean to be equal to relevant existing work in design, workmanship and all other respects.

"Re-fix" shall apply to existing materials arising from the Works and shall mean take from store and fix in new position, including making good, repairing and adjusting as necessary.

Preambles  
Demolitions and  
Alterations

**A. UNDERPINNING**

**1. FOUNDATIONS**

The following sequence of construction will be followed for any underpinning work to foundations:

- a) Excavate under foundation footing to a length of 1000 mm by 500 mm wide by 500 mm deep, 2000 mm centres.
- b) Fill the excavated cavity with concrete mix 1:3:6.
- c) Allow the concrete to set for two days.
- d) Repeat the above operation for the next panels until the whole foundation is underpinned.
- e) Break off the projecting foundation and leave flush with mass concrete surface.

**2. SUPPORT TO EXISTING SLAB**

- a) Prop up the first floor slab next to the wall to be demolished until new walling or column is built to carry universal beam.
- b) Erect in position universal beam to support existing slab as designed.
- c) Remove props seven days after erection of the beam.

## **EXCAVATIONS**

### **A. EXAMINE THE SITE**

The Contractor is assumed to have examined the Site carefully and ascertained for himself its nature and the kind of materials to be excavated.

### **B. EXCAVATIONS**

Excavations shall be to the widths and depths indicated on the Drawings or to such lesser or greater depths as the Architect may deem necessary and so instruct the Contractor in order to obtain satisfactory foundations.

Any difference in the quantity of work actually executed under such instructions and that provided in the Bills of Quantities shall be measured and valued by the Surveyor as a Variation under the relevant Conditions of Contract.

If, however, the Contractor excavates to any greater depths or widths than are shown on the Drawings or directed, then the Contractor shall, at his own expense, satisfactorily fill in such extra depth and width with concrete similar to that described for foundations.

### **C. BOTTOMS OF EXCAVATIONS TO RECEIVE FOUNDATIONS**

The Contractor shall report to the Architect when secure bottoms to the excavations have been obtained. Any concrete or other work executed before the excavations have been inspected and approved shall, if so directed, be removed and new work substituted after the excavations have been approved, all at the Contractor's expense.

The surface of the bottoms to excavations to receive foundations shall be levelled or graded to falls as required.

### **D. SIDES OF EXCAVATIONS**

Sides of excavations shall be maintained vertical by means approved by the Architect, and the Contractor shall also allow for keeping same free from fallen materials in his rates for excavations.

The Contractor shall also allow for keeping excavations free from, water and mud by baling, pumping or otherwise, in his rates for excavations.

A. **ROCK**

Excavation in rock shall **exclude** all material, which can be removed by hand and does not necessarily require the use of compressors or other mechanical equipment although the Contractor may use such equipment to loosen the material for ease of its removal. All topsoils, black cotton and other clay soils, murrum, stone and other fill and all similar materials will **NOT** be classified as rock.

Rock has been measured hereafter as extra over excavation for excavating in soft or hard rock. Soft rock shall be deemed to mean any material which cannot reasonably be removed without the use of mechanical plant such as rippers, compressors, traxcavators, but which does not require drilling, wedging or blasting. Local tuffs, magadi highly-consolidated laterite, weathered lavas, boulders or outcrops of harder rock not exceeding one cubic metre in volume, Nairobi building stone and similar material shall be classified as soft **rock**.

**Hard rock** shall be classified as material which is massive and geologically homogeneous and which requires the use of drilling, wedging or blasting for its removal such as blacktrap or similar material.

The Engineer's decision shall be final with regard to the classification of excavated materials.

B. **STARTING LEVEL**

Unless otherwise described the starting level of all excavations has been measured from the level remaining after completion of reduced level excavation. However, the Contractor's prices should include for carrying out the excavation work in any alternative sequence that he may require.

C. **BLASTING**

No blasting will be permitted without the prior approval of Local Authorities and the Architect.

D. **CART AWAY**

All surplus excavated materials where so directed and all rubbish are to be removed from the Site and the Contractor is to find his own dump and shall pay all charges.

E. **BORROW PITS**

No borrow pits will be allowed to be opened on the Site.

**A. FILLING OBTAINED FROM THE EXCAVATIONS**

Filling obtained from surplus excavated materials will only be incorporated if suitable material arises and is to be free from all weeds, roots, vegetable soil or other unstable materials and is to be filled in layers each of not more than 250 mm finished thickness. Each layer to be well wetted and consolidated as described hereafter.

**B. HARDCORE FILLING**

Hardcore for filling under floors, etc., shall be good hard stone ballast or quarry waste to the approval of the Architect broken to pass not greater than a 150 mm ring or to be 75% of the finished thickness of the layers being compacted, whichever is the lesser. Hardcore shall be free from all weeds, roots, vegetable soil, clay, black cotton soil or other unstable materials.

It shall be well graded with smaller stones and fine materials to give a dense compact mass after consolidation. Sufficient fine material shall be added to each layer to give gradation of material as necessary to obtain a solid compact mass after rolling. Hardcore filling is to be laid in layers each of a consolidated thickness not exceeding 250 mm. Each layer shall be compacted by at least 8 passes of a 10 tonne smooth- wheeled roller or a 2 tonne vibrating roller until all movement ceases. Sufficient water is to be added to obtain maximum compaction to the Architect's approval. To each layer a 25 mm thick layer of sand complying with the specification for fine aggregate for concrete shall be spread over the surface and forced into the hardcore by the use of a vibrating roller weighing not less than 2 tonnes; this operation should be carried out when the materials are dry and repeated whilst the sand is well watered. Should all the sand be absorbed the Architect may require a further layer to be applied and the process repeated.

The top surface of the hardcore shall be levelled or graded to falls as required, and shall then be blinded with a layer of similar material broken to 25 mm gauge and finished with a 10 ton smooth-wheeled roller. The surface so obtained shall be to the Architect's approval.

**C. MATERIALS FOUND IN EXCAVATIONS**

No sand, aggregate, murrum or other material found in the excavations is to be used in the Works without the written permission of the Architect.

**A. RATES FOR EXCAVATIONS**

The rates for excavation, including excavation in rock, **MUST INCLUDE** for trimming, levelling and preparing bottoms and all faces to receive concrete, etc., and for any extra excavation required for planking and strutting.

Prices shall include for excavating in any material encountered unless specifically otherwise described, handling, etc., of extra bulk after excavating, or before consolidating, any extra excavation required for formwork or planking and strutting, circular work, grubbing up any old drains, roots, etc., that may be encountered, for trimming sides and levelling and ramming bottoms, forming steppings and trimming excavation or filling to embankments and batters as required.

In his prices for the item "Allow for keeping the whole of the excavations free from water" the Contractor shall allow and make provision for keeping the whole of the Works thoroughly drained and clear of water below the lowest level of any part of them so long as may be required and if considered necessary by the Architect, continuously day and night by petrol or hand pumps or other mechanical appliances, pipes, chutes, dams, manholes, sumps, diversions or any other means necessary for that purpose. Water pumped from the trenches shall not be allowed to run down the road channels but shall be conveyed to the nearest surface water sewer, ditch or river through troughs, chutes or pipes.

**B. RATES FOR DISPOSAL**

Rates for disposal of excavated material are to include for the selection of spoil as it arises and for all double handling and re- excavation from spoil heaps not specifically ordered by the Architect.

**C. DIOTHENE SHEETING**

Diothene sheeting shall be 500 gauge or 1000 gauge as shown, and as produced by Plastics Africa Limited, or other equal and approved. Joints in sheeting shall be treble folded with 150 mm fold and taped at 300 mm intervals with 50 mm wide black plastic adhesive tape as manufactured by Cellotape Limited. The sheeting shall not be stretched but shall be laid loose with sufficient wrinkles to permit shrinkage up to 15%.

**D. CUTTING DOWN TREES**

The Contractor must consult the Architect before cutting down or pruning any trees or shrubs encountered on the Site.

## **CONCRETE WORK**

### **A. ARCHITECT/ENGINEER**

For the purposes of the concrete structure the Structural Engineer, hereafter referred to as "the Engineer", shall be deemed invested with the duties and be the representative of the Architect.

### **B. CODE OF PRACTICE**

All workmanship, materials, tests and performances in connection with the reinforced concrete work are to be in conformity with the latest edition of the British Standard Code of Practice (C.P. 8110 for "The Structural Use of Concrete") where not inconsistent with these Preambles.

### **C. SUPERVISION**

A competent person approved by the Engineer shall be employed by the Contractor whose duty it will be to supervise all stages in the preparation and placing of the concrete. All cubes shall be made and Site tests carried out under his direct supervision, in consultation with the Engineer.

### **D. CONTRACTOR'S PLANT, EQUIPMENT AND CONSTRUCTION PROCEDURES**

Not less than 30 days prior to the installation of the Contractor's plant and equipment for processing, handling, transporting, storing and proportioning ingredients, and for mixing, transporting and placing concrete, the Contractor shall submit drawings for approval by the Engineer, showing proposed general plant arrangements, together with a general description of the equipment he proposes to use. After completion of installation, the operation of the plant and equipment shall be subject to the approval of the Engineer.

Where these Preambles, the Bills of Quantities or the Drawings require specific procedures to be followed, such requirements are not to be construed as prohibiting use by the Contractor of alternative procedures if it can be demonstrated to the satisfaction of the Engineer that equal results will be obtained by the use of such alternatives.

Approval of plant and equipment or their operation, or of any construction procedure, shall not operate to waive or modify any provision or requirements contained in these Preambles governing the quality of the materials or of the finished work.

Where suspended floor slabs are to be constructed without expansion joints, concreting is to be in panels of size and positions to the approval of the Engineer. To permit setting shrinkages to occur, some panels will be left unconcreted until 7 days or more after main areas have been concreted. The Contractor must include for this method of construction in his pricing.

**A. TOLERANCES**

On all setting out dimensions of 5 metres and over a maximum non- accumulative tolerance of plus or minus 5 millimetres will be allowed. On all setting out dimensions under 5 metres a maximum non-accumulative tolerance of plus or minus 3 millimetres will be allowed. On the cross- sectional dimensions of structural members, unless otherwise required by the Drawings, a maximum tolerance of plus or minus 3 millimetres will be permitted.

The top surface of concrete floor slabs and beams shall be within 6 millimetres of the normal level and line shown on the Drawings. Columns shall be truly plumb and non-accumulative tolerance of 3 millimetres in each storey and not more than 15 millimetres out of plumb in their full height will be permitted. The Contractor shall be responsible for the cost of all corrective measures required by the Engineer to rectify work, which is not constructed within the tolerances set out above.

**B. MATERIALS GENERALLY**

All materials which have been damaged, contaminated or have deteriorated or do not comply in any way with the requirements of these Preambles shall be rejected and shall be removed immediately from the Site at the Contractor's expense. No materials shall be stored or stacked on floors without the Engineer's prior approval.

The sources of supply for all materials used for concrete work shall be approved by the Engineer before these materials are delivered on the Site. All materials shall comply with the requirements of the latest appropriate British Standard unless otherwise agreed with the Engineer, whose approval shall be obtained in writing.

The suppliers of materials shall give the Engineer access to their premises when directed for the purpose of obtaining samples of the materials for testing.

**C. SAMPLES**

Samples of materials shall be submitted as soon as possible after the Contract is let. No deliveries in bulk shall be made until the samples are approved by the Engineer. All condemned materials shall be removed from the Site within 24 hours.

Every facility shall be provided to enable the Engineer to obtain samples and carry out tests on the materials and construction. If these tests show that any of the materials or construction do not comply with the requirements of this Specification, the Contractor will be responsible for the costs of the tests and the replacement of defective materials and/or construction.

Samples of all materials proposed to be used shall be submitted to the Engineer and shall be tested, where required, by the Materials Branch of the Ministry of Works or other approved testing place, and receive his approval prior to being delivered in bulk upon the Works.



## Samples (Continued)

The Contractor's attention is drawn to the fact that the testing of samples of aggregate, sand and cement by the Materials Branch, M.O.W., takes time and it is of the utmost importance that the samples should be submitted for testing as soon as possible after the letting of the Contract. The Ministry will not accept any responsibility whatsoever for delay in the commencement of the Contract due to delay on the part of the Contractor in submitting samples.

### A. CEMENT

Cement, unless otherwise specified, shall be Portland cement of a brand approved by the Engineer and shall comply with the requirements of B.S. 12 with the exceptions that it may contain reactive volcanic ash (of not more than 10% of the total weight) and the quantity of insoluble residue permitted in B.S. 12 may be exceeded. A manufacturer's Certificate of Test in accordance with B.S. 12 shall be supplied for each consignment delivered to the Site.

Should the Contractor require to use cement of the rapid hardening variety, he shall obtain the approval of the Engineer and also obtain any instructions regarding modifications to these Preambles caused thereby. Any additional cost that may be caused by the use of rapid hardening cement shall be at the Contractor's expense. Cement may be delivered to the Site either in bags or in bulk.

If delivered in bags, each bag shall be properly sealed and marked with the manufacturer's name and on the Site is to be stored in weather-proof shed of adequate dimensions with a raised floor. Each consignment shall be kept separate and marked so that it may be used in the sequence in which it is received. Any bag found to contain cement, which has set or partly set, shall be completely discarded and not used in the Works. Bags shall not be stored more than 1,500 mm in height.

If delivered in bulk the cement shall be stored in a weather-proof silo either provided by the cement supplier or by the Contractor, but in either case the silo shall be to the approval of the Engineer.

### B. AGGREGATES

The aggregates shall conform with the requirements of B.S. 882 and the sources and types of all aggregates are to be approved in all respects by the Engineer before work commences.

The grading of aggregates shall be one within the limits set out in B.S. 882 and as later specified and the grading, once approved, shall be adhered to throughout the Works and not varied without the approval of the Engineer. Fine aggregate shall be clean, coarse, siliceous sand of good, sharp, hard quality and shall be free from lumps of stone, earth, loam, dust, salt, organic matter and any other deleterious substances. It shall be graded within the limits of Zone 1 or 2 of Table 2 of B.S. 882. **Only approved clean** river sand shall be used as fine aggregates and other substitutes shall be accepted.

Coarse aggregate shall be good, hard, clean approved blacktrap or similar stone, free from dust, decomposed stone, clay, earthy matter, foreign substances or friable thin elongated or laminated pieces. It shall be graded within the limits of Table 1 of B.S. 882 for its respective nominal size.

If in the opinion of the Engineer the aggregate meets with the above requirements but is dirty or adulterated in any manner it shall be screened and/or washed with clean water if he so directs at the Contractor's expense.

Aggregates shall be delivered to the Site in their prescribed sizes or gradings and shall be stockpiled on paved areas or boarded platforms in separate units to avoid intermixing. **On no account shall aggregates be stockpiled on the ground.**

Preambles  
Concrete Work

## **Aggregates (continued)**

### **A. WATER**

The water used for mixing concrete shall be from an approved source, clean, fresh and free from harmful matter and comply with the requirements of B.S.3148.

### **B. READY-MIXED CONCRETE**

Ready-mixed concrete **SHALL to** be allowed for use on this project.

### **C. CONCRETE MIXES**

Concrete mixes have been described either by the volumetric proportions or by the 28-day cube strength.

### **D. CONCRETE STRENGTHS**

Concrete mixes shall have the following minimum strengths as given by Works Cube Tests: -

#### **Minimum Crushing Strength at 28 Days**

	N/mm <sup>2</sup>
Grade A	33
Grade B	28
Grade C	22.5
Grade D	22.5

The average strength obtained from cube tests shall be 10% higher than the minimum strengths shown above.

### Concrete Strengths (Continued)

Works Cube Tests will not be required for Grade E blinding concrete which shall comprise 1:4:8 by volume.

Volumetric mixes shall comprise the following: -

	Cement/Kg	Fine Aggregate/CM	Coarse Aggregate/CM
1:1:2	50	0.03	0.07
1:1.5:3	50	0.05	0.10
1:2:4	50	0.07	0.14
1:3:6	50	0.10	0.20
1:4:8	50	0.13	0.26

#### A. MEASURED PROPORTIONS OF CONCRETE

##### Cement

The quantity of cement shall be measured by weight. Where delivered in bags, each batch of concrete is to use one or more whole bags of cement.

##### Aggregates

Concrete aggregates shall be measured by weight in a weigh batching machine. Weigh batching machines shall be of an approved type and shall be properly maintained and checked for accuracy at regular intervals.

#### B. CONCRETE GRADES A, B, C & D

The weights of fine and coarse aggregate to be used in concrete Grades A to D shall be limited in accordance with the table below. The proportions of fine to coarse aggregate and cement which the Contractor proposes to use for each of the mixes specified shall first be approved by the Engineer. The Contractor will then be required to prepare Preliminary Test Cubes and have these cubes tested as described for Work Cube Tests. The test results should be submitted to the Engineer in sufficient time for further tests to be carried out should they prove unsatisfactory. Cube strengths in the preliminary tests must show crushing strengths at least 25% higher than the strengths specified for Works Cube Tests. If the Contractor is unable to produce specified cube strengths, he will be required at his own cost to increase the cement content of the mix until satisfactory results are produced.

The Engineer may require at any time during the Contract the proportions of fine to coarse aggregate to be altered in order to produce a mix of greater strength or improved workability and providing that the total proportions of aggregate to cement remain unchanged, no claim for additional cost will be considered.

A. **MINIMUM CEMENT CONTENT**

**Concrete Grade**

Grade A

Grade B

Grade C

Grade D

Minimum Cement Content  
by weight to combined  
**total weight of aggregate**

1 to 4.5

1 to 5.5

1 to 7

1 to 7

B. **WATERPROOF CONCRETE**

Where waterproof concrete is specified, "Sealopruf Integral Water- proofing Compound" and "Sealoplaz Concrete Plasticiser" as manufactured by Sealocrete Group Sales Ltd., Atlantic Works, Hythe Road, London NW10 5RD, England, are to be added to the mixing water strictly in accordance with the manufacturer's instructions and at the rate of 0.50 litres and 0.25 litres respectively to each 50 Kg. bag of cement to which the aggregates have already been added and mixed. Not more than 25 litres of water per 50 Kg bag of cement are to be used unless otherwise approved by the Engineer.

C. **EXPANSION JOINTING**

Expansion joint filler shall be "Flexcell" as manufactured by Expandite Ltd., or "Resilex" as manufactured by Evomastics Ltd., or other equal and approved.

D. **JOINT SEALER**

Sealers shall be either hot or cold applied. Hot applied sealers shall comply with B.S. 2499. Cold mastics shall be applied by gun and where more than 12 mm deep shall include filling with loose packing yarn to within 2 mm from the outer face. All joint sealers are to be approved by the Engineer prior to their use.

E. **WATERBAR**

Waterbar shall be PVC waterbar as manufactured by Expandite Ltd., or other approved type and shall be provided in the positions indicated on the Drawings.

Joints shall be heat welded in accordance with the manufacturer's instructions and where the waterbar is to be fixed vertically, metal clips as manufactured by the supplier of the waterbar or of other approved design shall be provided to suspend the waterbar from the reinforcement.

Where waterproof concrete is used the Contractor shall adhere strictly to the position and type of construction joints as detailed on the Drawings. Any deviation from this procedure or the provision of additional construction joints will require the prior approval of the Engineer and any additional waterbar so required will be at the Contractor's expense.

Formwork shall be designed with sufficient timber formers and blocking pieces to support the waterbar and to ensure that it is not displaced during concreting. In the case of horizontal joints in vertical walling and similar members the formwork shall be so constructed as to permit the starter or upstand of concrete surrounding the lower half of the waterbar to be poured in the same operation as the slab or other concrete from which it springs. Formwork to walls or similar members where the waterbar is positioned at the base of the lift shall have sufficient openings not less than 300 mm square at approximately 200 mm above the level of the waterbar to permit checking that the waterbar is correctly positioned and not displaced during concreting. No concreting will be permitted to portions where upstand starters form an integral part until the formwork to the starter has been fixed and approved.

Preambles  
Concrete Work

A. **TESTING EQUIPMENT**

The Contractor shall provide the following equipment for carrying out control tests on the Site:

- (a) Straight edges 3 metres and 1 metre long for testing the accuracy of the finished concrete;
- (b) A glass graduated cylinder for use in the silt test for organic impurities in the sand;
- (c) Slump test apparatus;
- (d) Four 150 mm steel cube moulds with base plates and tamping rods to B.S. 1881.

B. **WORKS CUBE TESTS**

Works cubes are to be made at intervals as required by the Engineer in accordance with C.P. 114, and the Contractor shall provide a continuous record of the concrete work. The cubes shall be made in approved 150 mm moulds in strict accordance with the Code of Practice.

Three cubes shall be made on each occasion.

Each cube shall be marked with a distinguishing number (numbers) to run consecutively and the date, and a record shall be kept on Site giving the following particulars: -

- (a) Cube No.
- (b) Date made.
- (c) Location in work.
- (d) **7-day Test:**  
Date  
Strength
- (e) **28-day Test**  
Date  
Strength

Cubes shall be forwarded, carriage paid, to an approved Testing Authority, in time to be tested two at 7 days and the remaining one at the discretion of the Engineer. No cube shall be despatched within 3 days of casting.

Copies of all Works Cube Tests shall be forwarded to the Engineer and one shall be retained on the Site.

If the strengths required above are not attained, and maintained throughout the carrying out of the Contract, the Contractor will be required to increase the proportion of cement and/or substitute better aggregates so as to give concrete which does comply with the requirements of the Contract. The Contractor may be required to remove and replace at his own cost any concrete which fails to attain the required strength as ascertained by Works Cube Tests.

Preambles  
Concrete Work

## A. MIXING AND PLACING OF CONCRETE

The concrete shall be mixed only in approved power-driven mixers of a type and capacity suitable for the work, and in any event not smaller than 0.40/0.28 cu.m. capacity.

The mixer shall be equipped with an accurate water measuring device. All materials shall be thoroughly **mixed** dry before the water is added and the mixing of each batch shall continue for a period of **not less than two minutes** after the water has been added and until there is a uniform distribution of the materials and the mass is uniform in colour.

The entire contents of the mixed drum shall be discharged before recharging. The volume of mixed materials shall not exceed the rated capacity of the mixer. Whenever the mixer is started, 10% extra cement shall be added to the first batch and no extra payment will be made on this account.

As a check on concrete consistency slump tests may be carried out and shall be in accordance with B.S. 1881. The Contractor shall provide the necessary apparatus and carry out such tests as are required. The slump of the concrete made with the specified water content, using dry materials, shall be determined and the water to be added under wet conditions shall be so reduced as to give approximately the same slump.

The concrete shall be mixed as near to the place where it is required as is practicable, and only as much as is required for a specified section of the work shall be mixed at one time, such sections being commenced and finished in one operation without delay. All concrete must be efficiently handled and used in the Works within twenty (20) minutes of mixing. It shall be discharged from the mixer direct either into receptacles or barrows and shall be distributed by approved means, which do not cause separation or otherwise impair the quality of the concrete. Approved mechanical means of handling will be encouraged, but the use of chutes for placing concrete is subject to prior approval of the Engineer.

Concrete shall be placed from a height not exceeding 1,500 mm directly into its permanent position and shall not be worked along the shutters to that position. Unless otherwise approved, concrete shall be placed in a single operation to the full thickness of slabs, beams, and similar members, and shall be placed in horizontal layers not exceeding 1,500 mm deep in walls and similar members.

Concrete in columns may be placed to a height of 4 metres with careful placing and vibration and satisfactory results. Where the height of the column exceeds 4 metres suitable openings must be left in the shutters so that this maximum lift is not exceeded.

Concrete shall be placed continuously until completion of the part of the work between construction joints as specified hereinafter or of a part of approved extent. At the completion of a specified or approved part a construction joint of the form and in the positions hereinafter specified shall be made. If stopping of concreting be unavoidable elsewhere, a construction joint shall be made where the work is stopped. **A record of all such joints must be made by the Contractor and a copy supplied to the Engineer.**

Any accumulation of set concrete on the reinforcement shall be removed by wire brushing before further concrete is placed.

The Contractor shall provide runways for concreting to the satisfaction of the Engineer. Under no circumstances will the runways be allowed to rest on the reinforcement.

Preambles  
Concrete Work

## Mixing and Placing of Concrete (continued)

Care shall be taken that the concrete is not disturbed or subjected to vibrations and shocks during the setting period.

Mixing machines, platforms and barrows shall be clean before commencing mixing and be cleaned on every cessation of work.

Where concrete is laid on hardcore or other absorbent materials, the base shall be suitable and sufficiently wetted before the concrete is deposited.

### A. COMPACTION

At all times during which concrete is being placed the Contractor shall provide adequate trained and experienced labour to ensure that the concrete is compacted in the forms to the satisfaction of the Engineer.

Concrete shall not be placed at a rate greater than will permit satisfactory compaction nor to a depth greater than 400 mm before it is compacted.

During and immediately after placing, the concrete shall be thoroughly compacted by means of continuous tamping, spading, slicing and vibration. **Vibration is required for all concrete of Classes 40, 35, 25 and 20**

Care shall be taken to fill every part of the forms, to work the concrete under and around the reinforcement without displacing it and to avoid disturbing recently placed concrete which has begun to set.

Any water accumulating on the surface of newly placed concrete shall be removed and no further concrete shall be placed thereon until such water is removed.

Internal vibrators shall be a frequency of not less than 7,000 cycles per minute and shall have a rotating eccentric weight of at least 0.50Kg., with an eccentricity of not more than 12 mm. Such vibrators shall visibly affect the concrete within a radius of 250 mm from the vibrator.

Internal vibrators shall not be inserted between layers of reinforcement less than one and one half times the diameter of the vibrators apart. Contact between vibrators and reinforcement and vibrators and formwork shall be avoided.

Internal vibrators shall be inserted vertically into the concrete wherever possible at not more than 500 mm centres and shall constantly be moved from place to place. No internal vibrator shall be permitted to remain in any one position for more than ten seconds and it shall be withdrawn very slowly from the concrete.

## **Compaction (continued)**

In consolidating each layer of concrete the vibrating head shall be allowed to penetrate and re-vibrate the concrete in the upper portion of the underlying layer. In the area where newly placed concrete in each layer joins previously placed concrete more than usual vibration shall be performed, the vibrator penetrating deeply at close intervals along these contacts. Layers of concrete shall not be placed until layers previously placed have been vibrated thoroughly as specified.

Vibrators shall not be used to move concrete from place to place in the formwork.

At least one internal vibrator shall be operated for every 1.5 cubic metres of concrete placed per hour and at least one spare vibrator shall be maintained on Site in case of breakdown during concreting operations.

External formwork vibrators shall be of the high frequency low amplitude type applied with the principal direction of vibration in the horizontal plane. They shall be attached directly to the forms at not more than 1,200 mm centres.

In addition to internal and external vibration the upper surface of suspended floor slabs shall be levelled by tamping or vibrating to receive finishes. Vibrating elements shall be of the low frequency high amplitude type operating at a speed of not less than 3,000 r.p.m.

### **A. CONSTRUCTION JOINTS**

Construction joints shall be permitted only at the positions pre- determined on the Drawings or as instructed on the Site by the Engineer. In general they shall be perpendicular to the lines of principal stress and shall be located at points of minimum shear, viz., vertically at, or near, mid-spans of slabs, ribs and beams.

Suspended concrete slabs are generally to be cast using alternate bay construction in bays not exceeding 20 metres in length. No two adjacent bays are to be cast within a minimum period of 48 hours of each other. The joints between adjacent bays are to be in positions agreed with the Engineer.

Under no circumstances shall concrete be allowed to tail off, but it shall be deposited against stopping-off boards.

Before placing new concrete against concrete already hardened, the face of the old concrete shall be thoroughly hacked, roughened and cleaned, and laitance and loose material removed therefrom, and immediately before placing the new concrete the surface shall be saturated with water and covered with a coat of mortar at least 25 mm in thickness composed of cement and fine aggregate in the proportions used in the concrete.



A. **CURING AND PROTECTION**

Care must be taken that no concrete is allowed to become prematurely dry and the fresh concrete must be carefully protected within two hours of placing from rain, sun and wind by means of hessian sacking, polythene sheeting, or other approved means. This protective layer and the concrete itself must be kept continuously wet for at least seven days after the concrete has been placed. The Contractor will be required to provide complete coverage of all fresh concrete for a period of 7 days. Hessian or polythene sheeting shall be in the maximum widths obtainable and shall be secured against wind. The Contractor will **not** be permitted to use **old cement bags, hessian or other material in small pieces.**

Concrete in foundations and other underground work shall be protected from admixture with falling earth during and after placing.

Traffic or loading must not be allowed on the concrete until the concrete is sufficiently matured, and in no case shall traffic or loading be of such magnitude as to cause deflection or other movement in the formwork or damage to the concrete members. Where directed by the Engineer props may be required to be left in position under slabs and other members for greater periods than those specified hereafter.

B. **FAULTY CONCRETE**

Any concrete which fails to comply with these Preambles, or which shows signs of setting before it is placed shall be taken out and removed from the Site. Where concrete is found to be defective after it has set, the concrete shall be cut out and replaced in accordance with the Engineer's instructions. **On no account shall any faulty, honeycombed, or otherwise defective concrete be repaired or patched until the Engineer has made an inspection and issued instructions for the repair.** The whole of the cost whatsoever, which may be occasioned by the need to remove faulty concrete, shall be borne by the Contractor.

Preambles  
Concrete Works

**A. ROD REINFORCEMENT**

The steel reinforcement shall comply with the latest requirements of the following British Standards:-

Hot rolled bars for the  
reinforcement of concrete to B.S. 4449 (metric units)

Cold worked steel for the  
reinforcement of concrete to B.S. 4461 (metric units)

The Contractor will be required to submit a test certificate of the rollings. Reinforcement shall be stored on racks above ground level. All reinforcement shall be free from loose mill scale or rust, grease, paint or other substances likely to reduce the bond between the steel and concrete.

**B. FABRIC REINFORCEMENT**

To be electrically cross-welded steel wire mesh reinforcement to B.S.4483, 1969 and of the size and weight specified.

**C. FIBERMESH REINFORCEMENT**

Where fibermesh is specified it shall be Fibermesh "FIBERMIX 7025" and Fibermix "HARBOURITE 6927" as manufactured by Fibermesh Europe Ltd., Smeckley Wood Close, Sheepbridge Chesterfield, S41 9PZ England and shall comply with British Board of Agreement (BBA) Certificate No. 92/2857 and shall be added to the concrete mix in accordance with the manufacturer's instructions.

**D. FIXING ROD REINFORCEMENT**

Reinforcement shall be accurately bent to the shapes and dimensions shown on the Drawings and Schedules and in accordance with B.S. 4466 (1969). Reinforcement must be cut and bent cold and no welded joints will be permitted unless so detailed.

Reinforcement shall be accurately placed in position as shown on the Drawings, and before and during concreting, shall be secured against displacement by using No. 18 S.W.G. annealed binding wire or suitable clips at intersections, and shall be supported by concrete or metal supports, spacers or metal hangers to ensure the correct position and cover.

No concreting shall be commenced until the Engineer has inspected the reinforcement in position and until his approval has been obtained and the Contractor shall give two clear days' notice of his intention to concrete.

The Contractor is responsible for maintaining the reinforcement in its correct position, according to the Drawings, before and during concreting. During concreting a competent steel fixer must be in attendance to adjust and correct the position of any reinforcement, which may be displaced. The vibrators are not to come into contact with the reinforcement.

Preambles  
Concrete Work

A. **POSITION AND CORRECTNESS OF REINFORCEMENT**

Irrespective of whether any inspection and/or approval of the fixing of the reinforcement has been carried out as above, it shall be the Contractor's sole responsibility to ensure that the reinforcement complies with the details on the Drawings or Schedules and is fixed exactly in the positions shown therein and in the positions to give the prescribed cover. The Contractor will be held entirely responsible for any failure or defect in any portion of the reinforced concrete structure and including any consequent delay, claims, third party claims, etc., where it is shown that the reinforcement has been incorrectly positioned or is incorrect in size or quantity with respect to the detailed Drawings or Schedules.

B. **SPACER BLOCKS**

Spacer blocks of approved size and shape made of concrete similar to that used in the surrounding construction and fixed to the reinforcement or formwork by No. 18 S.W.G. wires set into the spacer blocks or other approved means shall be provided where necessary to ensure that the requisite cover is obtained. Where hollow concrete block construction is used, spacer blocks are to be provided as shown on the Drawings. These will consist of concrete blocks as described above made to fit the width of the rib less 3 mm tolerance and with single or double grooves (depending on the number of reinforcement bars used per rib) in the top surface with wire ties at each groove.

C. **CONCRETE COVER TO REINFORCEMENT**

Unless otherwise directed the concrete cover to rod reinforcement over **main** bars in any face shall be:-

Foundations against each face	75 mm
Foundations against blinding	50 mm
Columns	40 mm
Beams	25 mm
Slabs	15 mm

A. **FIXING FABRIC REINFORCEMENT**

The fabric shall be free from scale, rust, grease or other substance likely to reduce the bond between the steel and the concrete and shall be laid with minimum 300 mm laps and bound with No. 18 S.W.G. annealed iron wire.

B. **PROJECTING REINFORCEMENT**

Where reinforcement projects from a concreted section of the structure and this reinforcement is expected to remain exposed for some time, it is to be coated with a cement grout to prevent rust staining on the finished concrete. This grout is to be brushed off the reinforcement prior to the continuation of concreting.

C. **FIXTURES**

No openings, chases, holes or other voids shall be formed in the concrete without the prior approval of the Engineer. Details of any fixtures to be permanently built into the concrete including the proposed position of all electrical conduits 25 mm and over in diameter shall be submitted to the Engineer for his approval before being placed.

D. **CHASES, HOLES, ETC. IN CONCRETE**

The Contractor shall be responsible for the co-ordination with the Electrical and other Sub-Contractors for incorporating electrical conduit, pipes, fixing blocks, chases, holes and the like in concrete members as required and must ensure that adequate notice is given to such Sub-Contractors informing them when concrete members incorporating the above are to be poured. The Contractor shall submit full details of these items to the Engineer for approval before the work is put in hand. All fixing blocks, chases, holes, etc., to be left in the concrete shall be accurately set out and cast with the concrete.

E. **POSITION OF ELECTRICAL CONDUIT**

Unless otherwise instructed by the Engineer all electrical conduit to be positioned within the reinforced concrete shall be **fixed inside** the steel cages of beams and columns and **between the top and bottom** steel layers in slabs and similar members.

The proposed position of all electrical conduits 25 mm and over in diameter which are to be enclosed in the concrete shall be shown accurately on a plan to be submitted to the Engineer, whose approval shall be obtained before any such conduit is placed.

**A. FORMWORK**

The method and system of formwork which the Contractor proposes to use shall be approved by the Engineer before construction commences. Formwork shall be substantially and rigidly constructed of timber or steel or precast concrete or other approved material.

All timber for formwork shall be good, sound, clean, sawn well-seasoned timber, free from warps and loose knots and of scantlings sufficiently strong for their purpose.

**B. CONSTRUCTION OF FORMWORK**

All formwork shall be of sufficient thickness and with joints close enough to prevent undue leakage of liquid from the concrete and fixed to proper alignment, level and plumb and supported on sufficiently strong bearers, shores, braces, plates, etc., properly held together by bolts or other fastenings to prevent displacement, vibration or movement by the weight of materials, men and plant on same and so wedged and clamped as to permit of easing and removal of the formwork without jarring the concrete. Where formwork is supported on previously constructed portions of the reinforced concrete structural frame, the Contractor shall by consultation with the Engineer ensure that the supporting concrete structure is capable of carrying the load and/or sufficiently propped from lower floors or portions of the frame to permit the load to be temporarily carried during construction.

Soffits shall be erected with an upward camber of 5 mm for each 5 metres of horizontal span or as directed by the Engineer.

Great care shall be taken to make and maintain all joints in the formwork as tight as possible, to prevent the leakage of grout during vibration. All faulty joints shall be caulked to the Engineer's approval before concreting.

The formwork shall be sufficiently rigid to ensure that no distortion or bulging occurs under the effects of vibration. If at any time the formwork is insufficiently rigid or in any way defective the Contractor shall strengthen or improve such formwork as the Engineer may direct.

The Contractor's attention is drawn to the various surface textures and applied finishes required and the faces of formwork next to the concrete must be of such material and construction and be sufficiently true to provide a concrete surface which will in each particular case permit the specified surface treatment or applied finish.

All surfaces which will be in contact with concrete shall be oiled or greased to prevent adhesion of mortar. Oil or grease shall be of a non- staining mineral type applied as a thin film before the reinforcement is placed. Surplus moisture shall be removed from the forms prior to placing of the concrete.

## **Construction of Formwork (continued)**

Temporary openings shall be provided at the base of columns, wall and beam forms and at any other points where necessary to facilitate cleaning and inspection immediately before the pouring of concrete. Before the concrete is placed the shuttering shall be trued-up and any water accumulated therein shall be removed. All sawdust, chips, nails and other debris shall be washed out or otherwise removed from within the formwork. The reinforcement shall then be inspected for accuracy of fixing. Immediately before placing the concrete the formwork shall be well wetted and inspection openings shall be closed. The erection, easing, striking and removing of all formwork must be done under the personal supervision of a competent foreman, and any damage occurring through faulty formwork or its incorrect removal shall be made good by the Contractor at his own expense.

After removal of formwork, all projections, fins, etc., on the concrete surface shall be chipped off, and made good to the requirements of the Engineer. Any voids or honeycombing shall be treated as described in "Faulty Concrete".

### **B. STRIPPING FORMWORK**

All formwork shall be removed without undue vibration or shock and without damage to the concrete. No formwork shall be removed without the prior consent of the Engineer and the minimum periods that shall elapse between the placing of the concrete and the striking of the formwork will be as follows:-

Beam sides, wall and columns (unloaded)	2 days
Slab soffits (props left under)	3 days
Beam soffits (props left under)	7 days
Removal of props (partly subject to 7 days concrete cube strength being satisfactory) to:-	
Slabs	10 days
Beams	14 days
Cantilevered beams and slabs	28 days

If the Contractor wishes to take advantage of the shorter stripping times permitted for beam and slab soffits when props are left in place, he must so design his formwork that sufficient props as agreed with the Engineer can remain in their original positions without being moved in any way until expiry of the minimum time for removal of props. Stripping and re-propping will not be permitted.

The above times may be reduced in certain circumstances, at the discretion of the Engineer, provided an approved method is adopted at the Contractor's expense to ensure that the required concrete strength is attained before the forms are stripped.

Solid strips in composite slabs shall be considered as beams. The tops of retaining walls shall be adequately supported with stout raking props at intervals required by the Engineer. These props are not to be removed until 7 days after casting of the floor slab over.

### **A. SUPPORTING PROPS TO WALL AND BEAM SOFFITS**

Where directed by the Engineer supporting props to wall and beam soffits are to be left in position until completion of the whole of the reinforced concrete structure.

The props are to be to the approval of the Engineer and the Contractor must submit the suggested method of propping to the Engineer prior to removal of formwork to the relevant surfaces.

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## **EXPOSED CONCRETE FINISHES**

### **A. GENERAL**

Contractors will be required at an early stage in the Contract, to prepare samples for the approval of the Architect of the various concrete finishes specified hereafter. Samples are to be prepared using the same materials and the same methods of construction, compaction, curing, etc., as the Contractor proposes to use for executing the full quantity of the work.

A record of the mix, water content, method of compaction, any additives used, etc., is to be kept for each sample prepared. When the Architect has approved a sample it will be kept on Site in an approved location. The finishes in construction will be expected to be up to a standard equal to the approved sample. The Contractor is to include for all costs in preparing samples in his rates for the respective finish.

Consistency in cement colour and colour, grading and quality of aggregates must be maintained in all finished concrete work.

### **B. TAMPED FINISH**

Areas so specified shall be finished at the time of casting with a tamped finish to the Architect's approval, produced by an edge board. Board marks are to be made to a true pattern and will generally be at right angles to the traffic flow. Haphazard or diagonal tamping will not be accepted.

### **C. CHAMFERS AND REBATES TO EXPOSED CONCRETE**

Wherever concrete surfaces are to remain exposed and otherwise where specified or shown on the Drawings, rebates and chamfers are to be provided at junctions, corners, and changes in direction of concrete members.

Rebates will also be required to surrounds to chisel-dressed, brushed, or similar concrete finishes.

Rebates and chamfers are to have a fair face finish.

Unless otherwise instructed concrete pours to columns and to other members where applicable are to terminate only at the pre-determined rebate positions.

### **D. FAIR FACE**

Fair face surfaces shall be clean, smooth, even, true to form, line and level, and free from all board marks, joint marks, honeycombing, pitting, and other blemishes. Forms are to be provided with a smooth lining of plywood, steel, or other approved material, which will achieve the required finish without any general rubbing down. Rubbing down will only be permitted to remove any projecting fins at corners or joints.

## **Exposed Concrete Finishes (Continued)**

### **A. FINE FACE**

Fine face surfaces shall be as above but to a higher standard obtained from forms provided with an impervious sheet lining of metal or plastics faced plywood in large panels arranged in an approved pattern.

Rubbing down shall only be permitted after inspection by the Engineer. The finished surface shall be capable of receiving a painted finish.

### **B. BRUSHED CONCRETE FINISH**

Brushed concrete finish shall be provided to precast concrete members where specified or shown on the Drawings.

The surface is to be sprayed with water and brushed within 2 hours of casting to expose the aggregate to an extent to be approved by the Architect.

The brushed face will generally be contained within a surround of fair face concrete and the Contractor is to allow for retaining the fair face forms or otherwise protecting the surround whilst achieving the brushed finish.

### **C. BOARD-MARKED FINISH**

The required finish is to be a board-marked pattern and the boards are to be arranged vertically or horizontally to the patterns shown on the Drawings or as otherwise agreed by the Architect.

Formwork shall be made from timber of sufficiently strong grain to the Architect's approval in matching widths with straight sawn staggered joints. Short make-up lengths will not be permitted and boards shall generally be in the longest lengths practical. Construction joints shall be at predetermined positions and at recesses where so detailed.

### **D. CHISEL-DRESSED FINISH**

Chisel-dressed finish is to be carried out on any grade of concrete but not until it is at least 30 days old.

The surfaces are to be fully chisel-dressed to remove a maximum of 12 mm (average 9 mm) of the surface by shearing and exposing the aggregate without excessive cracking of the surrounding matrix.

Arrises of columns, beams, etc., are pre-formed fair face with timber fillets (which have been measured separately) set in the formwork and care must be taken in working up to these to preserve a clean line.



### **Chisel-dressed Finish (Continued)**

For vertical surfaces of walls and columns particular care must be taken to remove all sharp projections. For beam soffits this requirement is not necessary.

All surfaces requiring this treatment are to have the margins chisel- dressed by hand for a minimum width of 75 mm commencing from the fillet edge. Thereafter mechanical chisel-dressing may be used but the Contractor must ensure that a uniform texture and even plane surface is achieved.

The use of sharply pointed steel tools for both hand and mechanical chisel-dressing is essential.

Upon completion the surfaces are to be thoroughly wire brushed and washed down.

#### **A. PROTECTION OF FINISHES**

Wherever possible, in-situ exposed concrete finishes should be commenced at the highest level and worked progressively down the building.

Precaution shall be taken to avoid staining or discolouration of previously finished concrete faces by leakage of grout from newly placed concrete. The Contractor shall during all stages of construction adequately protect all concrete finishes from damage by leaking grout, knocking, paint stains, falling plaster, etc. In cases of balustrade walls to staircases and members where damage is otherwise likely, concrete finishes shall be protected by cladding with timber, celotex, or other approved sheeting. All Sub-Contractors shall be informed accordingly on the precautions to be taken.

#### **B. PRECAST CONCRETE**

The maximum size of coarse aggregate in precast concrete shall not exceed 20mm except for thicknesses less than 75 mm where it shall not exceed 10 mm.

The compaction of precast concrete shall conform with requirements given elsewhere in these Preambles except for thin slabs where use of immersion type vibrators is not practicable. The concrete in these slabs may be consolidated on a vibrating table or by any other methods approved by the Engineer.

Steam curing of precast concrete will be permitted. The procedure for steam curing shall be subject to the approval of the Engineer.

## **Precast Concrete (continued)**

The precast work shall be made under cover and shall remain under the same for seven days. During this period and for a further seven days the concrete shall be shielded by sacking or other approved material kept constantly wet. It shall then be stacked in the open for at least a further seven days to season before being set in position. Where steam curing is used these times may be reduced subject to the approval of the Engineer.

Precast concrete units shall be constructed in individual forms. The method of handling the precast concrete units after casting, during curing and during transport and erection shall be subject to the approval of the Engineer, providing that such approval shall not relieve the Contractor of responsibility for damage to precast concrete units resulting from careless handling.

Repair of damage to the precast concrete units, except for minor abrasions of the edges which will not impair the installation and/or appearance of the units will not be permitted and the damaged units shall be replaced by the Contractor at his own expense.

Except where precast work is described as "fair face" the moulds shall be made of suitably strong sawn timber true in form to the shapes required. Unless otherwise described faces are to be left rough from the sawn moulds.

Where precast work is described as "fair face" the moulds are to be made of metal or are to have metal or plywood linings or are to be other approved moulds which will produce a smooth dense fairface to the finished concrete suitable to receive a painted finish direct and free from all shutter marks, holes, pitting, etc.

The precast units shall be installed to the lines, gradients and dimensions shown on the Drawings or as directed by the Engineer.

### **A. CONCRETE SURFACE BEDS**

The concrete shall be placed as soon as possible after being mixed. In transporting the concrete adequate precautions shall be taken to avoid damage to the prepared base. The concrete shall be spread to such a thickness that when compacted it shall have the finished thickness as specified or shown on the Drawings.

A layer of concrete 50 mm less than the finished thickness shall first be spread and struck off at the correct level to receive the top fabric reinforcement. The top layer shall then be added. Not more than 30 minutes shall elapse between spreading the bottom layer and the start of compaction of the top layer. The Contractor shall be responsible for maintaining the reinforcement in its correct position during the placing and compaction of the concrete.

### **Concrete Surface Beds (continued)**

The compacting and finishing of the concrete shall be effected by immersion vibrators and a hand or mechanical tamper weighing not less than 10 Kg. per linear metre and having a tamping edge shod with a steel strip 75 mm wide fixed to the tamper by countersunk screws. Immersion vibrators with "spade" attachments will be permitted. Compaction shall be continued until a dense, scaled surface finish is achieved. Over- compaction causing an excessive amount of fines to be brought to the surface shall be avoided.

The surface of the concrete shall be finished with a wood float finish to the levels, falls and crossfalls, as directed or shown on the Drawings and shall be subject to the following tolerances:-

1. The level shall be within + or - 6 mm of the levels directed.
2. The falls shall be within 10% of the falls directed.
3. The smoothness shall be such that departures from a 3 metre straight edge laid in any direction shall not exceed 3 mm.

Minor irregularities shall be made good by the use of a steel float but in no circumstances shall mortar be used to make good the surface. Before the concrete has finally set and after completion of the floating the concrete shall be brushed with a strong-headed broom to produce a grooved finish in parallel lines to the satisfaction of the Engineer.

As soon as the surface has been finished it shall be protected against too-rapid drying by means of damp hessian, polythene sheeting or other approved means placed carefully on the surface and kept damp and in position for 7 days and the concrete shall be kept wet for a further 21 days. The most critical period is the first 24 hours after placing and curing during that time shall be very thorough. The Contractor is to obtain the Engineer's approval to the material and method he proposes to use for curing and no concreting will be permitted until sufficient such material is on Site.

Forms shall not be removed from freshly placed concrete until it is at least 24 hours old. Care shall be taken that in their removal no damage is done to the concrete, but should any damage occur the Contractor shall be responsible for making it good.

#### **A. HOLLOW CLAY POTS**

The hollow clay pots for suspended floor shall be manufactured by Messrs. Clayworks Ltd., P.O. Box 48202, Nairobi and shall be suspended floor units size 350 mm x 300 mm x 230 mm deep. Care shall be taken in unloading, stacking and placing hollow pots in position. Damaged units shall not be incorporated in the works and shall be removed from site.

**A. HOLLOW BLOCK SUSPENDED FLOORS**

The hollow blocks shall be set out to the dimensions shown on the drawings. Slip tiles will not be required. Care shall be taken when placing and vibrating the concrete to avoid damage to or displacement of the pots.

**B. NOTES CONCERNING PRICING**

The Contractor must allow for all costs incurred during the progress of the Contract for complying with the provisions concerning the preparation and use of graded mixes.

Prices for plain or reinforced concrete shall include for mixing, hoisting, depositing, compacting, curing and protection at the various levels required throughout the building, and shall also include for forming or hacking a satisfactory key for all faces receiving asphalt and plaster work. Prices for slabs shall include for forming construction joints at bay edges, including all necessary temporary formwork and supplying records of such joints to the Engineer.

Prices for steel rod reinforcement shall include for cutting to lengths and all labour in bending and cranking, forming hooked ends, handling, hoisting and fixing in position and for providing all necessary tying wire, spacer blocks and supports. Prices for fabric reinforcement shall include for all straight cutting and waste, handling, hoisting and fixing in position, providing all necessary tying wire, and supports and all extra material in laps

The prices for formwork shall include for extra material at joints, extra labour and waste for narrow widths, small quantities, overlaps, passings at angles, straight cutting and waste, splayed edges, notchings, etc., and for fixing at the various levels including battens, struts, and supports and for bolting, wedging, easing, striking and removal. Prices for linear items such as boxings shall include for angles and ends.

Prices of all precast concrete shall include for all moulds, finishing as described, handling, reinforcement, hoisting and fixing at the required levels and for casting or cutting to the exact lengths required and any waste resulting from such cutting.

Prices for expansion joints shall include for cutting to size and all temporary supports and prices for expansion joint sealers shall include for all temporary battens or fillets required to form the necessary grooves.

Prices for hollow concrete block suspended construction must be "all inclusive" to include for concrete hollow tiles, in-situ concrete ribs, concrete topping, concrete filling to open ends of hollow concrete tiles and solid concrete bearings and beams.

The Contractor is to allow in his prices for carrying out all tests as specified in this Section apart from work cube tests for which a provisional item is included in the Preliminaries section of these Bills of Quantities.

The price for wrought formwork shall include for fair face finish either by rubbing down or by smooth lining, all as described in these Preambles.

Preamble  
Concrete Works

## **WALLING**

### **A. STONE**

Stone for walling shall be hard, dense, stone from an approved quarry with accurately dressed faces on all sides.

Stone walling described as load-bearing shall have a minimum crushing strength of 14.00 Newtons per square millimetre and shall comply with C.P. 111 : Part 2.

### **B. CONCRETE BLOCKS**

All hollow or solid concrete blocks for general use shall comply with B.S. 2028, Type 'A' and with C.P. 111 : Part 2, of minimum crushing strength of 3.5 Newtons per square millimetre, and must be obtained from and approved manufacturer, equal to samples deposited with and approved by the Architect.

Concrete block walling described as load-bearing shall have a minimum crushing strength of 7.0 Newtons per square millimetre.

All concrete blocks must be cured for a minimum period of four weeks before use and all testing of blocks is to be carried out by the Ministry of Works Materials Testing Laboratory.

### **C. WALL REINFORCEMENT**

All walling of thickness 150 mm and less shall be reinforced with hoop iron 25 mm wide or similar reinforcement centrally in every alternate joint (vertically for the full length of the walls, lapped and crimped 300 mm at running joints and full width of wall at angles and intersections).

### **D. WALL TIES**

20 Gauge hoop iron ties 25 mm wide x 450 mm long to be provided for every alternate course at all connections between block walls and reinforced concrete columns or walls. One end to be cast into concrete and other end bent and built into mortar joint of walling.

### **E. CHASING**

Chasing in load-bearing walling of electrical conduit, pipes, etc., is to be kept to a minimum size of cut and positions and runs of chases are to be approved by the Architect before any cutting is commenced. Horizontal runs will not be permitted.

A. **CEMENT**

The cement shall be as described in "Concrete Work".

B. **SAND**

The sand for mortars shall be as described in "Concrete Work", except that it shall be fine sand.

C. **LIME**

The lime for plastering shall comply with B.S. 890, Class 'A' for non- hydraulic lime and shall be as rich as obtainable and to approval. It must be freshly burnt and shall be slaked at least one month before being used by drenching with water, well broken up and mixed and the wet mixture shall be passed through a sieve of sixty-four meshes to the square inch. Lime putty shall consist of freshly slaked lime as above described, saturated with water until semi-fluid and passed through a fine sieve; it shall then be allowed to stand until superfluous water has evaporated and it has become of the consistency of thick paste, in no case for a shorter period than one month before being used, during which it must be kept damp and clean and no portion of it allowed to become dry.

Alternatively, hydrated lime with 70% average calcium oxide content may be used and it must be protected from damp until required for use. It shall be soaked to a putty at least 24 hours before use.

D. **MORTARS**

Cement mortar shall consist of one part of Portland cement, to three parts of sand by volume.

The cement/lime mortar shall consist of one part of Portland cement, one part of lime and six parts of sand by volume.

The ingredients of mortar shall be measured in proper gauge boxes on a boarded platform, the ingredients being thoroughly mixed dry, and again whilst adding water. In the case of cement/lime mortar the sand and lime shall be mixed first and then the cement added.

All mortar is to be thoroughly mixed to a uniform consistency with only sufficient water to obtain a plastic condition suitable for trowelling. No mortar that has commenced to set is to be used or remixed for use.

**A. SETTING OUT**

The Contractor shall provide proper setting out rods and set out on the same all work showing openings, heights, sills and lintels and shall build the various walls and piers to the thicknesses, widths and heights shown upon the Drawings. No part of the walling shall be carried up more than one metre higher at one time than any other part and in such cases the jointing shall be made in long steps so as to prevent cracks arising and all walls shall be levelled round at floor and wall heads.

**B. BONDING WALLING**

All blocks shall be properly bonded together and in such a manner that no vertical joint in any one course shall be within 100 mm of a similar joint in the courses immediately above and below. Alternative courses of walling at all angles and intersections shall be carried through the full thickness of the adjoining walls.

All perpend, reveals, quoins and other angles and joints of the walls, etc., shall be built strictly true and square.

**C. LAYING AND JOINTING**

All bricks and blocks are to be well wetted before laying and tops of walls where left off shall be well wetted before commencing building. All joints are to be 10 mm thick and flush up and grouted in solid as the work proceeds.

All exposed faces of walls for plastering are to be left rough and the joints raked out while mortar is green to form adequate key.

All other faces shall be cleaned down on completion with a wire brush or as necessary and mortar droppings, smear marks, etc., removed and rates must include for this.

**D. PUTLOG HOLES**

All putlog holes shall be carefully, properly and completely filled up on completion of walling and before plastering is commenced.

**E. FAIR FACE**

Walling described, as fair-faced shall be built with selected blocks and pointed with neat flush joints. Stone walling shall be fine chisel dressed.

Preambles  
Walling

A. **BRICKS**

All bricks shall be obtained from Clayworks Limited, P.O. Box 45154, Nairobi, of sizes as required and shall be hard, sound, square, well- burnt, uniform in shape and free from cracks, stones and other defects.

Samples of bricks shall be deposited with and be approved by the Architect before being used and all subsequent bricks used in the Works shall be equal to the approved sample.

B. **DAMP-PROOF COURSES**

Damp-proof courses shall be bituminous felt to B.S. 743 weighing 7 lbs. per square yard, free from tears and holes, and be laid with 150 mm minimum laps on and including a levelling screed of cement mortar.

C. **PRICES TO INCLUDE**

The rates for walling shall include for all reinforcement, all straight cutting, bonding, plumbing angles, forming reveals, pinning up to underside of concrete soffits and cutting up to sides of columns and building in ends of lintels and sills.

D. **BRICK WORK**

Brick work shall be built to a gauge of 4 courses to 340 mm of wall height including 10 mm bed joints.

Facing walls shall be built in stretcher bond and be tied to the blockworks or concrete backing walls with 10 gauge galvanised wire wall ties 500 mm girth, formed to a figure 8 and twisted together at the lap.

Three wall ties per square metre are to be used, wall ties for concrete backing walls shall be cast into the concrete including all temporary fixing to formwork.

Facing walls shall be pointed as the work proceeds. External walls shall have recessed joints and internal walls shall have flush joints. Facing walls shall be kept perfectly clean and no rubbing down of blockwork will be allowed.

E. **FAIR FACE**

Walling described as fair faced shall be built with selected bricks and pointed with neat recessed joints.



## **ROOFING**

### **A. PREPARATION OF SURFACES**

All surfaces to receive roofing shall be clean, dry, free from fins or projections and loose materials, and with cracks or voids filled with cement mortar.

### **B. LIGHTWEIGHT ROOF SCREEDS**

Roof screeds will be executed to the approval of the Specialist Roofing Sub-Contractor and will consist of cement, sand and pumice (1:3:7) finished with 6 mm layer of cement and sand (1:4) topping. Screeds shall not be laid in areas exceeding ten square metres during any period of 24 hours. As bays are formed batten strips must be used to retain the exposed edge of the screed. Screeds shall be finished to falls and currents to receive roofing.

### **C. ASPHALT ROOFING**

Asphalt roofing will be executed by an approved Specialist Roofing Sub- Contractor. Before any application of roofing, the Contractor is to ensure that all roof surfaces are thoroughly cleaned by sweeping.

Roofing asphalt to be B.S. 988/1966 Table 3, Column III, Tropical Mastic asphalt laid in two coats to a total thickness of 20 mm on and including black sheathing felt and finished with two coats aluminium paint to horizontal and vertical surfaces.

### **D. GALVANISED CORRUGATED STEEL SHEETING**

The roof sheeting shall be of the gauge specified and comply with B.S. 3083. The roof sheeting shall be laid and fixed with steel hook bolts and nuts, steel roofing bolts and clips or steel roofing screws to B.S. 1494: Part 1.

### **E. GALVANISED LT5 LONG TROUGH STEEL SHEETS**

Where specified the roof sheeting and fittings shall be 24 gauge LT5 galvanised steel long trough roofing as manufactured by MABATI LTD. P.O. Box 46934, NAIROBI or other equal and approved manufacturer. The roof sheeting shall be laid and fixed with approved purpose made hook bolts, washers, etc. to 'z' purlins. Where so specified the roofing shall be prepainted with a RESINCOT FINISH.

**A. GALVANISED IT4 LONG TROUGH STEEL SHEETS**

Where specified, the roof sheeting and fittings shall be 24 gauge IT4 roofing as manufactured by GALSHEET KENYA LTD. P.O. Box 78162, NAIROBI or other equal and approved manufacturer. The roof sheeting shall be laid and fixed with approved purpose made hook bolts, washers, etc. to 'z' purlins. The ridge flashing sheets shall be IT4 profiled sheeting curved to the radii shown on the drawings. Where so specified the roofing shall be prepainted with a RESINCOT FINISH.

**B. CORRUGATED ASBESTOS CEMENT ROOFING SHEETS**

Where specified, the roof sheeting shall be as manufactured by Simbarite Ltd., P.O. Box 90662, Mombasa. The roof sheeting shall be laid and fixed with approved hook bolts or roofing screws, complete with washers and caps.

**C. CONCRETE TILE ROOFING**

Concrete single lap tiles and fittings shall be to B.S.473 & 550 Part 2, Group B of the colour, finish, type, size and manufacturer approved by the Architect. A full range of fittings must be available to match the tiles. Tiles shall be 380 x 230 mm nominal unless otherwise specified. Tiles and fittings must be true to shape and of uniform structure. Surface coatings shall be firmly bonded.

Fixing shall include nailing to battens at every third course, at eaves, verges, and at the top course under the ridge.

Ridges and hips shall be bedded in cement mortar and roofs shall be left watertight.

**D. MANGALORE TILE ROOFING**

Mangalore clay tiles shall be "best" or selected quality as manufactured by the Miritini Brick and Tile Works.

Tiles shall be well wetted before use and all dropped or broken tiles shall be rejected before carrying.

Cutting of tiles, where necessary at hips or valleys, shall be carefully and neatly carried out with properly sharpened tools.

Tiling shall be executed to the Architect's satisfaction and roofs left watertight.

**E. PROTECTION**

All roof surfaces shall be kept clean and protected and handed over watertight at completion.

## **CARPENTRY, JOINERY AND IRONMONGERY**

### **A. ALL TIMBER**

All timber shall be in accordance with the latest approved Grading Rules issued by the Government of Kenya (Legal Notice No. 358). Timber for Carpentry shall be SECOND (OR SELECT) GRADE and timber for Joinery shall be FIRST (OR PRIME) GRADE.

### **B. GENERALLY**

All timber as it arrives on the Site shall be inspected by the Contractor, and any timber brought on the Site and not complying with the Specification or not approved, must be removed forthwith from the Site and only timber as approved shall be used in the Works.

The Contractor shall upon signing the Contract purchase sufficient supplies of specified hardwoods to avoid possible shortages at a later date.

### **C. SPECIES OF TIMBER**

The following timber shall be used.

<b>Standard Common Name</b>	<b>Botanical Name</b>
Cypress	Cypress spp.
Podocarpus	Podocarpus spp.
Cedar	Juniperus procera
E.A. Camphor wood	Ocotea usambarensis
African Mahogany (Munyama)	Khaya anthotheca
Mninga	Pterocarpus Angolensis
Mvule	Clorophora excelsa
Elgon Olive	Olea welwitschii
Pine	Pinus spp.(radiata & patula)

### **D. TOLERANCES IN THICKNESS**

Shall conform with the following extracts of Government of Kenya Grading Rules:-

- (1) Hardwood Grading: (First and Second Grades)

Preambles  
Carpentry, Joinery  
and Ironmongery

### **Tolerances in Thickness (Continued)**

The following tolerances in thickness will be admitted:

- (a) 15 mm oversize on pieces up to 25 mm in thickness.
- (b) 3 mm oversize on pieces over 25 mm and up to 50 mm in thickness.
- (c) 6 mm oversize on pieces over 50 mm in thickness.

Undersize will not be permitted.

(2) Softwood Grading: Strength Grades (for Carpentry)

First and Second Grades.

Undersize not allowed.

Oversize: All timber to be sawn oversize by 1.5 mm for 25 mm thickness and width. Not more than 3 mm in thickness and not more than 6 mm in width.

(3) Softwood Grading: Appearance Grades (for Joinery)

First and Second Grades.

All as for Strength Grades above.

**A. INSECT DAMAGE**

All timber shall be free of live borer beetle or other insect attack when brought upon the Site. The Contractor shall be responsible up to the end of the maintenance period for executing at his own cost all work necessary to eradicate insect attack of timber which becomes evident, including the replacement of timber attacked or suspected of being attacked, notwithstanding that the timber concerned may have already been inspected and passed as fit for use.

**B. SEASONING OF TIMBER**

All timber shall be seasoned to a moisture content of not more than 22% for Carpentry and 15 % for Joinery.

Preambles  
Carpentry, Joinery  
and Ironmongery

**A. PRESSURE IMPREGNATION PRESERVATIVE TREATMENT**

All carpentry timbers, sawn joinery and timber grounds for fixing joinery shall be treated with pressure impregnated "Celcure" or "Tanalith" solution with a minimum nett retention of 0.35 lbs. of dry salt per cubic foot. If so required "charge sheets" issued after treatment with "Celcure" or "Tanalith" shall be submitted by the Contractor to the Architect for his retention. All cut ends and any other cut faces of timbers sawn after treatment shall be treated before fixing with "Celcure B" or "Wolmanol" solution brushed on.

The Contractor's prices for such timber hereinafter must allow for the above treatment.

**B. INSPECTION AND TESTING**

The Architect shall be given facilities for inspection of all works in progress whether in workshop or on site. The Contractor is to allow for testing of prototypes of special construction units and the Architect shall be at liberty to select any samples he may require for the purpose of testing, i.e. for moisture content, or identification, species, strength, etc.; such tests will be carried out by the Forestry Department.

**C. CLEARING UP**

The Contractor is to clear out and destroy or remove all cut ends, shavings and other wood waste from all parts of the buildings and the Site generally, as the work progresses and at the conclusion of the work.

This is to prevent accidental borer infestation and to discourage termites and decay.

**D. WORKMANSHIP**

All Carpenter's work shall be accurately set out in strict accordance with the Drawings and shall be framed together and securely fixed in the best possible manner with properly made joints; all brads, nails and screws, etc., shall be provided as necessary, directed and approved, and the Contractor's prices shall allow for all the foregoing.

All workmanship shall be of the best quality.

All Carpenter's work shall be left with sawn surfaces except where particularly specified to be wrought.

Preambles  
Carpentry, Joinery  
and Ironmongery

A. **DIMENSIONS**

Dimensions of timber for Carpentry left with sawn faces shall comply with the previous Clause specifying tolerances in thickness. Dimensions for wrought members shall be as described in "Joinery".

B. **JOINTING**

All timber shall be as long as possible and practicable to eliminate joints. Where joints are unavoidable surfaces shall be in contact over the whole area of the joint before fastenings are applied.

No nails, screws, or bolts are to be fixed in any split end. If splitting is likely, or is encountered in the course of any work, holes for nails are to be prebored at diameter not exceeding 4/5th of the diameter of the nails. Clenched nails must be bent at right angles to the grain.

Lead holes are to be bored for all screws. When the use of bolts is specified the holes are to be bored from both sides of the timber and are to be of the diameter  $D + D/16$ , where D is the diameter of the bolt. Nuts must be brought up tight but care is to be taken to avoid crushing of the timber under the washers.

## **JOINERY**

### **A. GENERALLY**

All Joiner's work shall be accurately set out on boards to full size for the information and guidance of the artisans before commencing the respective works, with all joints, iron work and other works connected therewith fully delineated. Such setting out must be submitted to the Architect and approved before such respective works are commenced.

All Joiner's work shall be cut out and framed together as soon after the commencement of the building as is practicable, but not to be wedged up or glued until the building is ready for fixing same. Any portions that warp, wind or develop shakes or other defects within six months after completion of the Works shall be removed and new fixed in their place together with all other work which may be affected thereby, all at the Contractor's own expense.

All work shall be properly mortised, tenoned, housed, shouldered, dove- tailed, notched, pinned, bradded, etc., as directed and to the satisfaction of the Architect and all properly glued up with the best quality glue. All horns to be cut off neat and square with back of jambs before incorporating into the walls. The feet of all door jambs are to be cut off square with the floor finish and are to be dowelled to the structure with steel dowels.

Joints in joinery must be as specified or detailed, and so designed and secured as to resist or compensate for any stresses to which they may be subjected. All nails, sprigs, etc.; are to be punched and puttied. Loose joints are to be made where provision must be made for shrinkage, glued joints where shrinkage need not be considered and where sealed joints are required. Glue for load-bearing joints or where conditions may be damp must be of the resin type. For non-load-bearing joints or where dry conditions may be guaranteed casein or organic glues may be used.

All exposed surfaces of joinery work shall be wrought and all arrises "eased off" by planing and sandpapering to an approved finish suitable to the specified treatment.

### **B. DIMENSIONS**

All joinery has been described by nominal sizes and a 3 mm reduction off specified sizes will be allowed for each wrought face except where described as finished sizes in which case joinery shall hold up full dimensions.

A. **FIXING JOINERY**

All beads, fillets and small members shall be fixed with round or oval brads or nails well punched in and stopped. All larger members shall be fixed with screws. Brass screws shall be used for fixing of all hardwoods, the heads let in and pelleted over with wood pellets to match the grain.

B. **BEDDING FRAMES, ETC.**

The Contractor's rates must include for bedding frames, sills, etc., in mortar or dressing surfaces of walls, etc., in lieu.

C. **PLUGGING CONCRETE AND WALLS**

Round wood plugs shall not be used. All work described as plugged shall be fixed with screws to plugs formed by drilling concrete, walls, etc., with a proper tool of suitable size at 750 mm spacing and filling the holes completely with "Philplug" rawl plastic or "Rawlplugs" in accordance with the manufacturer's instructions. Alternatively, and where so agreed by the Architect, hardwood dovetailed fixing clips, dipped in "Wolmanol" or "Celcure B" solution cut and pinned or bedded in cement mortar (1:3) may be used.

D. **FIBREBOARD**

Fibreboard shall be 12 mm "Celotex", or other equal and approved termite-proofed softboard, cut to panels with V-edges.

E. **PLYWOOD**

Plywood shall be manufactured to comply with B.S. 1455 (Grades 1 or 2, Type INT for "interior work"; type WBP for "exterior work"). Marine plywood shall comply with B.S. 1088.

F. **BLOCKBOARD**

Blockboard shall be laminated board to approval, and exposed edges shall be lipped with 20 mm hardwood.

G. **CHIPBOARD**

Chipboard shall be manufactured to comply with B.S. 5669.

H. **GYPSUM WORKS**

All Gypsum Works and quality to be approved by Project Architect.



**A. PLASTIC SHEETING**

Plastic sheeting shall be "Formica" sheeting 1.5 mm thick and securely fixed with approved type waterproof adhesive, and in the colours approved by the Architect.

**B. SELECTED FOR CLEAR FINISH**

All timber and joinery work described as selected for clear finish shall be executed by a specialised joinery firm. The name of the firm shall be submitted to the Architect before any works commence.

**C. PROTECT JOINERY**

Any fixed joinery which in the opinion of the Architect is liable to become bruised or damaged in any way, shall be completely cased and protected by the Contractor until the completion of the Works. The casing shall consist of two layers of polythene sheeting or plywood coverings.

**D. FLUSH DOORS**

Semi-solid flush doors shall be manufactured to the thicknesses specified and consist of 100 mm wide framing all round with minimum 25 mm thick horizontal core battens at not more than 75 mm centres, pressure-impregnated as described and bored with 15 mm diameter ventilation holes at 300 mm centres. Doors shall have two lock blocks and be faced both sides with 6 mm plywood and have 25 mm mahogany twice rebated lipping all round and otherwise be equal to the requirements of B.S. 459 Part 2A, and equal to an approved sample.

**E. BOTTOM EDGES**

Bottom edges of doors shall be painted with one coat of approved primer before fixing.

**F. IRONMONGERY**

All locks and ironmongery shall be fixed with screws, etc., to match. Before the woodwork is painted, handles shall be removed, carefully stored and refixed after completion of painting and locks oiled and left in perfect working order. All keys shall be labelled with the door reference marked on labels before handing to the Architect on completion.

**G. PRICES TO INCLUDE**

Prices of items hereafter shall include for the foregoing labours, etc., and in addition the prices for linear items are to include all internal and external angles, either mitred or tongued, all fair, fitted, stopped, notched or returned ends, all similar incidental labours and all short lengths.

## **METALWORK**

### **A. ALL MATERIALS**

All materials shall be of the best quality, free from defects. The materials in all stages of transportation, handling and piling shall be kept clean and damage from breaking, bending and distortion prevented.

### **B. STRUCTURAL STEELWORK**

Materials and workmanship shall conform with the requirements of B.S. 449. Steel frames, trusses and purlins shall be carried out by a Nominated Sub-Contractor.

### **C. NAILS, SCREWS AND BOLTS**

Nails, screws and bolts shall be of best quality mild steel of lengths and weights approved by the Architect. Nails shall be to B.S. 1202 and bolts to B.S. 916.

Bolts shall project at least two threads through nuts and all bolts passing through timber shall have washers under heads and nuts.

### **D. WORKMANSHIP**

All work shall be carried out in the most workmanlike manner and strictly as directed by the Architect.

Welding shall be neatly cleaned off and units shall be prefabricated in the workshop wherever possible, the minimum of site welding being employed.

All screwed work shall have full internal and external threads and holes shall have been cleaned off. Countersinkings must be concentric.

### **E. RAINWATER GOODS**

Prices shall include for building in, casting in or cutting mortices for fastenings, all making good, jointing, short lengths and all extra joints in the case of fittings.

**A. METAL WINDOWS AND DOORS**

Metal windows and doors shall be manufactured to B.S. 990 from hot rolled mild steel sections produced by reputable mills and to be of dimensions and weights laid down in B.S. 990. Where specified all casements and doors are to be made from heavy sections. Corners of frames are to be mitred and welded, and glazing bars, etc., either tenon riveted or welded into frames. Top-hung casements are to be hung on steel hinges and fitted with bronze peg stays. Side-hung casements are to be hung on projecting hinges and fitted with bronze single point handle and cabin hook with concealed sliding stays.

**B. FIXING METAL WINDOWS, DOORS, ETC.**

The Contractor's prices for fixing metal windows, doors, etc., shall include for assembling and fixing, including screwing to wood frames or cutting mortices for lugs in concrete or walling and running with cement mortar (1:4), bedding frames in similar mortar and pointing in mastic, bedding sills, transoms and mullions in mastic, making good plaster around both sides, and fixing, oiling and adjusting all fittings and frames.

**C. QUALITY OF MATERIALS AND WORKMANSHIP**

The quality and workmanship of materials used in this Contract shall conform to the requirements of the following British Standards:-

B.S. 15	Mild steel for general structural purposes.
B.S. 449	The use of structural steel in building.
B.S. 4 p.2	Hot Rolled Hollow Sections.
B.S. 994	Cold Rolled Steel Sections.
B.S. 938	General requirements for the metal Arc welding of structural steel tubes to B.S. 1775.
B.S.1856	General requirements for the Metal Arc Welding of Mild Steel.
B.S. 639	Covered Electrodes for the Metal Arc Welding of Mild Steel.

Materials may be required at any time to be tested in accordance with the British Standards listed above.

The cost of successful tests will be borne by the Client, but the Sub- Contractor shall supply at his own expense test specimens when required. The cost of tests, which do not comply with the Standard, will be borne by the Sub-Contractor.

**A. STRUCTURAL HOLLOW SECTIONS**

All hollow sections are to be connected by electric welding.

For butt welds the fusion surface of each member must be properly aligned and prepared.

**B. ELECTRIC WELDING**

All welding is to be in accordance with the requirements of B.S. 1856 and 938 and the electrodes shall comply with B.S. 639.

Fusion faces shall be free from irregularities which could interfere with the welding material. These faces shall also be free from any deleterious material such as rust, grease and paint.

All welds shall be of the specified finished sizes and the sequence of the welding shall be carried out in a manner that will give minimum distortion to the welded parts.

Edges for welding shall be prepared by planing or machine flame cutting.

During welding all parts will be maintained in their correct position.

Welds shall be carried out with each run closely following the one prior with sufficient time between to allow for removal of slag.

Each run of weld is to be inspected and the Sub-Contractor shall ensure that unsatisfactory welds are cut out or remade to the required standard.

The minimum size of fillet weld shall be 6 mm.

All completed welds shall have a regular and smooth surface. The weld material shall be solid with complete fusion throughout the weld and to the farecut metals.

Any defects shall be cut out or made good to approval.

External faces of butt welds to be ground smooth.

**C. PAINTING**

All steel is to be wire brushed and any loose scale, dirt or grease shall be removed before any painting is commenced. One coat of red oxide primer Type A to B.S. 2523 shall be applied at the shop.

Any damage to the priming paint shall be made good to the Architect's satisfaction.

## **PLASTERWORK AND OTHER FINISHINGS**

### **MATERIALS**

#### **A. CEMENT**

The cement shall be as previously described in "Concrete Work".

#### **B. SAND**

The sand shall be as described for fine aggregate but that for plastering shall be light in colour and well graded to a suitable fineness in accordance with the nature of the work in order to obtain the finish directed.

#### **C. LIME**

The lime for plastering shall comply with B.S. 890 Class "A" for non- hydraulic lime and shall be as rich as obtainable and to approval. It must be freshly burnt and shall be slaked at least one month before being used by drenching with water, well broken up and mixed and the wet mixture shall be passed through a sieve of sixty-four meshes to the square inch. Lime putty shall consist of freshly slaked lime as above described, saturated with water until semi-fluid and passed through a fine sieve; it shall then be allowed to stand until superfluous water has evaporated and it has become of the consistency of thick paste, in no case for a shorter period than one month before being used, during which it must be kept damp and clean and no portion of it allowed to become dry.

Alternatively, hydrated lime with 70% average calcium oxide content may be used and it must be protected from damp until required for use. It shall be soaked to a putty at least 24 hours before use.

#### **D. LIME PLASTER**

Lime plaster shall consist of a backing coat in cement, lime and sand (1:2:9) and a finishing coat of lime putty skim with 10% cement added.

#### **E. POLISHED GRANOLITHIC**

Polished granolithic shall consist of one part cement (by volume) coloured light brown with an approved dye, to two parts (by volume) of metamorphic coral chippings graded from 6 mm down to 3 mm with not more than 15% to pass a No. 40 B.S. Sieve.

Plasterwork, etc.

**A. POLISHED TERRAZZO**

All terrazzo work shall be carried out by an approved Sub-Contractor. Polished terrazzo shall consist of a first coat of cement and sand (1:3) and a 12 mm finishing coat of "Snowcrete" and marble chippings (1:2), coloured with "Cementone No. 1" colouring compound mix in the proportions of 1:10, compound to cement. The overall thickness will be as specified in the measured work.

Where terrazzo paving is specified as incorporating especially selected large aggregate the thickness of the finishing coat shall be increased as required.

**B. VINYL ASBESTOS TILES**

The vinyl asbestos floor tiles shall be 300 x 300 x 2 mm thick and shall comply with B.S. 3260. They shall be of selected pattern and colour from the "Marley Heavy Duty Tile Range" or equal and approved.

**C. GLAZED WALL TILES**

White glazed wall tiles shall be size 150 x 150 x 6 mm thick, manufactured to comply with B.S. 1281.

**D. QUARRY TILES**

Quarry tiles shall be manufactured to B.S. 1286 type A and shall be chosen from the manufacturer's standard colour range.

**E. PRECAST TERRAZZO TILES**

Precast terrazzo tiles are to be as manufactured by the Linotic Flooring Company Ltd., P.O. Box 42290, Nairobi, or equal and approved.

**F. MARBLE GLOMERATE TILES**

Marble glomerate tiles shall be as manufactured by the Linotic Flooring Company Ltd. All edges shall be square and faces polished, or equal and approved.

**G. BEDS AND BACKINGS**

Beds and backings shall be composed of cement and sand in the volumetric proportions stated in the measured work.

Preambles  
Plasterwork, etc.

## **WORKMANSHIP**

### **A. GENERALLY**

All screeds and pavings shall be finished smooth, even and truly level unless otherwise specified and paving shall be steel trowelled.

Rendering and plastering shall be finished plumb, square, smooth, hard and even, and junctions between surfaces shall be perfectly true, straight and square.

At the junction of all concrete work and block walling a 150 mm wide strip of expanded metal lathing must be included to avoid plaster cracks.

All arrises and angles shall be clean and sharp or slightly rounded or thumb coved as directed including neatly forming mitres.

All surfaces to be paved or plastered must be brushed clean and well wetted before each coat is applied. All cement pavings and plaster shall be kept continually damp in the interval between application of coats and for seven days after the application of the final coat.

Where dubbing out is required, shall be composed of one part cement to six parts of sand.

Partially or wholly set materials will not be allowed to be used or remixed. The plaster, etc., mixes must be used within two hours of being combined with water.

### **B. SAMPLES**

The Contractor shall prepare samples minimum one square metre of each of the screeds, pavings and plastering for the approval of the Architect, after which all work executed shall conform with the approved samples.

### **C. LIME PLASTERING**

Lime plastering shall be carried out in two coats having a total thickness of not less than 15 mm to walls and 10 mm to ceilings.

The first coat shall be trowelled to a perfectly true and even surface and finished with a wood float, the surface being sprinkled with water from a brush during the process and before it has set thoroughly scratched to form a key. The finishing coat shall not be less than 1.5 mm thick, thoroughly worked with a steel trowel, sprinkled with water as before and be brought to a uniform smooth and hard surface.

Preambles  
Plasterwork, etc.

**A. TYROLEAN RENDERING**

Tyrolean rendering shall consist of a trowelled backing coat in cement and sand mortar (1:4) gauged with 10% lime, to a thickness of 10 mm and a finishing coat of cement sand mortar (1:4) applied with an approved machine to a thickness of between 5 and 10 mm, to provide an even and uniform texture. Coloured cement or pigment is to be used if so directed by the Architect.

**B. GRANOLITHIC AND TERRAZZO PAVING**

Granolithic and terrazzo paving shall be spread and well compacted and given only sufficient trowelling to produce a perfectly level surface immediately after laying. When the granolithic or terrazzo has stiffened sufficiently so that a hard surface can be obtained without laitance, then the surface shall be machine ground to a perfectly even and smooth surface. On no account will dusting with neat cement to the surface be permitted.

**C. VINYL TILING**

Vinyl asbestos floor tiles shall be stored and laid in accordance with the manufacturer's written recommendations using a bitumen-based adhesive. The tiles shall be laid with butt joints straight both ways. Tiling shall start from the centre of a room or area.

**D. QUARRY TILES**

Quarry tiles shall be bedded in 10 mm thick cement mortar (1:3) with 10 mm joint laid straight both ways. The joints shall be filled with cement mortar neatly flush pointed. The tiles are to be soaked in water before laying.

**E. MARBLE TILES AND TERRAZZO TILES**

The tiles are to be bedded in 10 mm thick cement mortar (1:3) with fine butt joints. The surface is to be washed and polished on completion.

**F. CERAMIC WALL TILES**

Wall tiles shall be fixed with a cement-based adhesive with 3 mm wide joints straight both ways. When an area of tile is complete the joints should be grouted with white cement.

**G. BEDS AND BACKINGS**

Floor screeds shall not be laid in areas exceeding ten square metres during any period of 24 hours. As bays are formed steel edge strips must be used to retain the exposed edge of the screed.

The thicknesses and mixes of the screeds shall be adjusted to suit the various top dressings and the Contractor must first ascertain what finish is intended to each specified area before the work of laying screeds is put in hand.

Screeds shall be finished with a wood float for wood blocks and steel trowel for thermoplastic and similar tiles.

Preambles  
Plasterwork, etc.



**A. MAKING GOOD**

All making good shall be cut out to a rectangular shape, the edges undercut to form a dovetail key and finished flush with the face of surrounding paving or plaster. Cut out and make good all cracks, blisters, and other defects and leave the whole of the work perfect on completion.

**B. PRICES GENERALLY**

In addition to the foregoing, prices of superficial items are to include for work in narrow widths, all linear labours, angles and arrises, all fair edges, for making good up to or stopping to a line at the required level at top of skirting or dadoes where directed and for making good up to windows, door frames and similar.

The prices for all linear items unless otherwise measured are to include for all short lengths, angles and arrises, mitres, and ends of every description.

Prices for paving are to include for adequate covering and protection during the progress of the Works to ensure that the floors are handed over in perfect condition on completion.

Prices for all pavings and plastering, etc., shall include for hacking concrete surfaces and for raking out joints of walls 12 mm deep and for cross-scoring undercoats to form a proper key.

Plastering on walls generally shall be taken to include flush faces of lintels, beams, etc., in same.

**C. PROTECTION**

The Contractor's rates for all finishings shall allow for adequate protection against damage by all following trades or any other causes, to the satisfaction of the Architect.

Preambles  
Plasterwork, etc.

## **GLAZING**

### **A. GLASS**

All glass shall be manufactured complying with B.S. 952, free from flaws, bubbles, specks and other imperfections.

Glass panes shall be cut to sizes to fit the openings with not more than 1.5 mm play all round and where puttied shall be sprigged to wood or clipped to metal frames.

Clear sheet glass shall be ordinary glazing (O.Q.) quality. Polished plate glass shall be (G.G.) quality.

Anti-bandit glass shall be 9 mm thick laminated glass of approved type.

### **B. PUTTY**

Putty for glazing in wood frames shall be composed of pure linseed oil and powdered whiting free from grittiness in accordance with B.S. 544 Type 1 putty.

Putty for glazing in metal frames shall be quick hard-setting tropical putty specially manufactured for use with steel windows.

Rebates of metal frames receiving glass shall be prepared and treated with primer for putty prior to glazing and putty shall be primed ten days after glazing.

### **C. BEDDING STRIPS**

Bedding strips shall be of plastic or washleather approved by the Architect and shall be cut to fit exactly the line of frame and beads.

### **D. ON COMPLETION**

Remove all broken, scratched or cracked panes and replace with new to the satisfaction of the Architect. Clean inside and out with an approved cleaner. On no account shall windows be cleaned by scraping with glass.

## **PLUMBING**

### **A. EXECUTION OF THE WORKS**

The works shall be carried out strictly in accordance with:-

- a) By-Laws of the Local Authority
- b) British Standard Code of Practice C.P. 301 : 1971, Building Drainage
- c) British Standard Code of Practice C.P. 310 : 1965, Water Supply
- d) British Standard Code of Practice C.P. 304 : 1968, Sanitary Pipework above Ground
- e) British Standard Code of Practice C.P. 305 : 1974, Sanitary Appliances
- f) British Standard Code of Practice C.P. 342 : 1970, Centralised Hot Water Supply
- g) All other relevant British Standard Specifications and Codes of Practice (hereinafter referred to as B.S. and C.P. respectively)
- h) The Working Drawings
- i) The Architect's instructions

### **B. EXTENT OF THE WORKS**

The Works include, unless otherwise specified, the supply, installation, testing and commissioning, and delivery up clean and in working order of the installations shown on the Drawings and specified in the Specifications, including all details such as:-

Cold and hot water pipes, discharge pipes (the term discharge pipe is used as a comprehensive all-embracing description in place of the traditional soil and waste terms), drain and ventilating pipes, valves, fire fighting installations and equipment, thermal insulation, etc., and all labour, materials, tools, instruments and scaffolding necessary to execute the work in a first-class manner.

The Contractor shall undertake all modifications demanded by the Authorities in order to comply with the current regulations and produce all certificates, if any, from the Authorities without extra charge.

Preambles  
Plumbing

**A. EXTENT OF THE CONTRACTOR'S DUTIES**

At the commencement of the work, the Contractor shall investigate and report to the Architect the availability of all materials and equipment to be used in the work. If not available, the Contractor shall at this stage place orders for the materials in question and copy the orders to the Architect. Failure to do so shall in no way relieve the Contractor from supplying the specified materials and equipment in time.

The Contractor shall be responsible for verifying all dimensions relative to his work by actual measurements taken on the Site.

**B. RECORD DRAWINGS**

During the execution of the Works on the Site the Contractor shall, in a manner approved by the Architect, record on Working Drawings and Contract Drawings all information necessary for preparing Record Drawings of the installed Contract Works. Marked-up Drawings and other documents shall be made available to the Architect as he may require for inspection and checking.

Record Drawings may, subject to the approval of the Architect, include approved Working Drawings adjusted as a correct record of the installation of the Contract Works.

Record Drawings shall be prepared on approved translucent linen or plastic material suitable for reproduction by the Dyeline process or similar.

**C. MATERIALS AND WORKMANSHIP GENERALLY**

All materials, equipment and accessories are to be new and in accordance with the requirements of the current rules and regulations where such exist, or in their absence with the relevant B.S.

Uniformity of type and manufacture of equipment or accessories is to be preserved as far as practicable throughout the whole work.

The Contractor shall, if required by the Architect, submit samples of materials to the Architect for his approval before placing an order.

Where a particular item is specified as a particular firm's product "or similar" it is to be clearly understood that this is to indicate the type and quality of the equipment required. No attempt is being made to give preference to the equipment supplied by the firm whose name or products are quoted.

Where particular manufacturers are specified herein, no alternative make will be considered, and the Architect shall be allowed to reject any other makes.

**Materials and Workmanship Generally (continued)**

The Contractor will be entirely responsible for all materials, apparatus, equipment, etc., furnished by him in connection with his work, and shall take all special care to protect all parts of finished work from damage until handed over to the Employer.

The work shall be carried out by competent workmen under skilled supervision. The Architect shall have the authority to have any of the work taken down or changed, which is executed in an unsatisfactory manner.

## A. TUBING GENERALLY

All tubing exposed on faces of walls shall, unless otherwise specified, be fixed at least 25mm clear of adjacent surfaces with approved holderbats built into walls, cut and pinned to walls in cement mortar; where fixed to woodwork, suitable clips shall be used.

All tubing specified as fixed to ceilings, roofs or roof structures shall be fixed with approved mild steel hangers cut and pinned to ceilings, roofs or roof structures. Where three or more tubes are fixed to ceilings, roofs or roof structures close to each other, they shall be fixed in positions, which leave the lower surfaces at the same horizontal level, unless otherwise specified.

Where insulated, tubing shall be fixed with the insulation at least 25mm clear of adjacent surfaces and with at least the same clearance between insulated pipes.

Tube fixings and supports shall, if nothing else is specified, be arranged at intervals not greater than those given in the following tables:-

### Mild Steel Tubing

Diameter of Pipe in mm	Maximum Spacing of Fixing in mm	
	Horizontal Runs	Vertical Runs
15	1,800	2,400
20	2,400	3,000
25	2,400	3,000
32	2,700	3,000
40	3,000	3,600
50	3,000	3,600
65	3,600	4,600
80	3,600	4,600
100	4,000	4,600

### Tubing Generally (continued)

#### Unplasticised P.V.C. Pipes

Diameter of Pipe in mm	Maximum Spacing of Fixing in mm	
	Horizontal Runs	Vertical Runs
12	300	900
19	400	900
25	400	900
32 - 152	500	1,200

Each support shall take its due proportion of the weight of the tube or pipe and shall allow free movement for expansion and contraction.

Full allowance shall be made for the expansion and contraction of pipework, precautions being taken to ensure that any forces produced by pipe movements are not transmitted to valves, equipment or plant.

All tubing specified as chased into walls shall have the wall face neatly cut and chased, the tubing 'wedged and fixed and plastered over.

Preambles  
Plumbing

Where tubing is laid in trenches care shall be taken to ensure that fittings are not strained.

All water systems shall be provided with sufficient drain points to enable them to function correctly. Valves and other user equipment shall be installed with adequate access for operation and maintenance. Where valves and other operational equipment are unavoidably installed beyond normal reach or in such a position as to be difficult to reach from a short step-ladder, extension spindles with floor or wall pedestals shall be provided.

Before any joint is made, the pipes shall be hung in their supports and adjusted to ensure that the joining faces are parallel and any falls which shall be required are achieved without springing the pipe. All formed bends shall be made so as to retain the full diameter of the pipe.

Sleeves shall be provided where tubes pass through walls and solid floors to allow movement of the tubes without damage to the structure. The overall length of the sleeve shall be such that it projects at least 2 mm beyond the finished thickness of the wall or partition.

Tubing shall be cut by hacksaw or other method, which does not reduce the diameter of the tube or form a bead or feather, which might restrict the flow.

#### **A. GALVANISED MILD STEEL TUBING**

Galvanised mild steel tubing shall be in accordance with B.S. 1387 : 1967 with screwed and socketed joints; medium-duty for pipes above ground, heavy-duty for pipes under ground, cast into concrete or chased into walls. Fittings for same shall be galvanised malleable iron to B.S. 1940 : 1965, with threads to B.S. 21 : 1957

Joints shall be made with fine hemp and an approved jointing compound or tape. Compound containing red lead must not be used. Long screw connectors and flat-faced unions shall not be used, unless otherwise specified. Where laid underground or cast in concrete, galvanised mild steel tubing shall be protected by "Densotape" or similar, wound on at least two layers thick, or given two coats of approved bitumen. Minimum earth cover to underground tubing shall be 450 mm.

Where chased into walls or cast in concrete, galvanised mild steel tubing carrying hot water shall be wrapped with hair felt secured by copper wire.

The fixing of galvanised mild steel tubing shall use:-

- a) Malleable iron "schoolboard" pattern brackets for building in or for screwing to structure,
- or b) Malleable iron pipe rings, with either back plate, plugs or girder clips;
- or c) Purpose-made straps to the Architect's approval.

#### **A. UNPLASTICISED P.V.C. PIPES**

Unplasticised P.V.C. discharge and ventilating pipes and fittings shall be to B.S. 4514 : 1964, Grade 2

U.P.V.C. ventilating pipes passing through roofs shall terminate at least 300 mm above the roof level and shall be protected against insect penetration by a copper wire mosquito-proof balloon grating securely bound on the top of the pipe with stout copper wire. Joints for U.P.V.C. discharge and ventilating pipes shall be spigot and socket joints which incorporate synthetic rubber rings or they shall be closely fitting spigots and sockets jointed together by means of a solvent solution provided by the pipe maker.

## **Unplasticised P.V.C. Pipes (continued)**

Joints of U.P.V.C. discharge and ventilating pipes to cast iron drain pipes shall be by means of purpose-made cast iron sleeves jointed with tarred yarn and fibrous lead yarn properly caulked into the wetted sockets. Joints to pitch fibre drain pipes shall be made with approved adaptors.

The fixing of U.P.V.C. pipes shall use holderbats of metal, or plastic-coated metal, care being taken that they do not damage the pipe when tightened. Where anchor points are specified to control thermal movement, the holderbats shall be fitted on the pipe sockets. Intermediate holderbats fitted to the pipe barrel shall be such as to allow thermal movement to take place.

At the foot of all U.P.V.C. ventilating stacks and where shown on the Drawings and in other positions as directed or necessary for cleaning, inspection pipes with door shall be provided, with a bolted oval recess door, shaped internally to bore of pipe.

### **A. VALVES, COCKS, TAPS, ETC.**

Draw-off taps and stop valves shall comply with B.S. 1010 : 1959.

Brass ball valves shall comply with B.S. 1212 : 1953 and copper floats for ball valves shall comply with B.S. 1968 : 1953, and plastic floats for same shall comply with B.S. 2456 : 1954

Sluice valves shall comply with B.S. 1218 : 1946

Gate valves on main supply shall comply with B.S. 3465.

Manually operated mixing valves for ablutionary and domestic purposes shall comply with B.S. 1415 : 1955

Drain taps shall comply with B.S. 2879 : 1957

Safety valves, stop valves and other safety fittings for air receivers and compressed air installations shall comply with B.S. 1123 : 1961

Safety valves for thermal storage water heaters shall comply with B.S. 959 : 1967

### **B. THERMAL INSULATION**

Thermal insulating material for hot and cold water supply installation shall conform to B.S. 1334 : 1966, unless otherwise specified. The Contractor shall ensure that the thermal insulating materials used conform to the requirements of the Local Fire Authority.

All thermal insulating materials shall be delivered to the Site in a dry condition and housed in a store until drawn upon for use.

## **Thermal Insulation (continued)**

All surfaces to be insulated shall be cleaned carefully before fixing the insulating material.

The installation of insulating materials shall be entrusted only to operatives skilled in the work. All insulating material, however fixed, shall be in close contact with the surface to which it is applied and all joints shall be sealed after ensuring that edges or ends of any section are built up close to one another. Edges or ends shall be cut or sharpened on site as necessary. Supporting bands shall be either non-corrodible material or adequately protected against rust.

Each pipe or item shall be insulated separately.

Fixing of insulating material shall suit the progress of other installation works in the building.

Insulation, where pipes are fixed exposed, shall be pre-formed rigid sections with approved finish. Where pipes are fixed in close ducts, above false ceilings, etc., matts cut in suitable sections on the site shall be used, well secured with copper or galvanised wire, finally covered with asphalt roofing paper.

Where subject to outside weather or other potentially damp or wet conditions, the insulation shall be adequately protected against moisture pick-up.

If nothing else is specified, the minimum thickness of insulating material for cold and hot water pipes shall be as specified in B.S. 1588 : Table 1.

### **A. SANITARY APPLIANCES**

The installation of sanitary appliances shall be in accordance with C.P. 305 : 1952 and B.S. 3202 : 1959

The appliances shall be fixed in the positions shown on the Drawings or as directed by the Architect.

For all sanitary appliances, the necessary number of supports, brackets, plugs, screws, washers, jointing materials, etc., shall be provided.

Where supports, brackets, etc., are screwed to wall or structures, "Rawlplugs" or similar shall be used.

Notraps for any appliance whatsoever shall have a seal less than 75 mm.



## **Sanitary Appliances (continued)**

Fixing shall, if required by the Architect, include for temporarily erecting appliances in the required position of service and discharge pipes, taking down, storing and permanently fixing after completion of wall finishings and connecting to service and discharge pipes.

Care shall be taken at all times and particularly after fixing, to protect appliances from damage.

Upon completion of the work, all appliances shall be cleaned of plaster, paint, etc., and carefully examined for defects.

### **A. FIRE FIGHTING EQUIPMENT**

The specified fire fighting equipment shall be supplied and installed by the Contractor in the position shown on the Drawings.

Portable fire extinguishers shall comply with the following B.S.:

- |    |  |                            |
|----|--|----------------------------|
| a) | Water type (soda acid)   | - B.S. 138 :1948           |
| b) | Foam type (chemical)   | - B.S. 740 : Part 1 : 948  |
| c) | Foam type (gas pressure)   | - B.S. 740 : Part 2 : 1952 |
| d) | Water type (gas pressure)  | - B.S. 1382 : 1948         |
| e) | Halogenated hydrocarbon type<br>(carbon tetrachloride and<br>chlorobromomethane) | - B.S. 1721 : 1968         |
| f) | Carbon dioxide type  | - B.S. 3326 : 1960         |
| g) | Dry powder type  | - B.S. 3465 : 1962         |
| h) | Water type (stored pressure)   | - B.S. 3709 : 1964         |

Fire hose couplings and ancillary equipment shall comply with B.S. 336 : 1965

Hose reels : Hoses to be 20 mm reinforced red rubber canvas double braided, to comply with B.S. 3169 : 1970. Waterway pressure castings machined throughout. Hose plates 560 mm diameter steel. Inlet valve with inlet screwed 3/4" B.S.P. Controllable plastic jet spray nozzles to give instantaneous finger-tip control of spray pattern and shut-off. Test pressure : 2.5 Kg/square centimetre. Finish fire red.

The installation of fire extinguishers shall be in accordance with C.P.402: Part 3 : 1964

Preambles  
Plumbing

## A. TESTING

The whole of the water and discharge installation shall be tested to the satisfaction of the Architect and the Local Authority. The Contractor shall provide all necessary testing apparatus and facilities for testing the installations and any defective work shall be replaced immediately and shall be the subject of re-testing until found satisfactory.

Where pipes are to be lagged, chased into walls or otherwise concealed, the work shall be tested prior to lagging, making good chases, etc.

All hot and cold water installations shall, if nothing else is specified, be tested to 1.5 times normal working pressure, minimum 4KG/cm squared; and compressed air systems tested with minimum 10 Kg/cm squared.

The test pressure shall be applied by means of a manually-operated test pump or, in the case of long mains or mains of large diameter, by a power-driven test pump. Pressure gauges shall be recalibrated before the test.

The test pressure shall be maintained by the pump for about one hour and a leak as specified in C.P. 310, Section 502 J, shall be approved, but any visible individual leak shall be repaired.

Valves, cocks and taps shall be absolutely tight under the test pressure for the corresponding pipes as well as under a small pressure.

Testing of discharge pipes shall be carried out as specified in C.P. 304, 1968.

Testing drain pipes shall be carried out in accordance with C.P. 301 : 1950

Tests shall, if necessary, be done in sections as work proceeds without extra payment.

All tests shall be carried out in the presence of a representative of the Local Authority and/or the Architect or his representative.

Upon completion of the work, including re-testing if necessary, the installation shall be thoroughly flushed out.

**A. STERILISATION OF WATER SUPPLY PIPES**

Sterilisation shall be carried out strictly in accordance with C.P. 310 : 1965. The sterilisation will not be approved unless the final test for residual chlorine mentioned in the above C.P. proves positive.

**B. COMMISSIONING**

Before handing over, the Contractor shall confirm that the installation has been examined, tested, is ready for use, that it will operate and can be maintained efficiently.

When handing over, the Contractor shall demonstrate to the Employer the methods of operation, limitations, and the maintenance requirements and safety precautions to be observed; and shall also hand over any tools for operating, cleaning, testing and maintenance of the installation

On acceptance the Contractor shall provide the Employer with operation and maintenance instructions and any other documents or information appropriate to the installation.

**C. MEASUREMENT**

Prices for tubing shall include for all short lengths and sockets. Connectors, elbows, bends, formed bends, tees, reducing pieces and other fittings are measured separately and are to include for any extra joints and other extra labour required. The prices for the reducing tees shall include for any extra reducing pieces which may be required, if the correct reducing tee is not available.

All pipes have been measured over all bends, tees and other fittings and the Contractor shall include in his prices for all cutting and waste.

## **DRAINAGE**

### **A. SETTING OUT**

Lines of drains shall be accurately set out and trenches excavated and bottomstrimmed to accurate gradients to approval before pipelaying commences.

### **B. DRAIN TRENCHES**

Excavation shall be made to such depths and dimensions as may be required by the Architect to obtain proper falls and firm foundations. No permanent construction shall be commenced on any bottom until the excavation has been examined and approved by the Architect. Should the Contractor in error, or without the instructions of the Architect, make any excavation below the required level of the drain or bed, as the case may be, he will be required to refill such excavation to the correct levels with Class 15 concrete at his own expense.

Prices for excavation must include for excavating in all materials met with and for trimming bottoms to the necessary falls and for any extra excavation required for planking and strutting and working space, all as described under "Excavation". Excavation in hard rock requiring the use of the compressors or wedging is measured separately.

### **C. KEEP EXCAVATION DRY**

The Contractor shall keep the whole of the trenches or other excavations free from water, and he shall execute such works and install such pumps as may be required to keep the excavations dry at all times. No subsoil water shall be discharged into the sewers without the written permission of the Architect.

### **D. UPVC DRAIN PIPES AND FITTINGS**

UPVC drain pipes and fittings shall comply in all respects with B.S. 4660, golden brown in colour and with jointing by lip seal socketted fittings. The natural rubber for lip seal joints shall be to B.S. 2494.

Laying and jointing shall be carried out strictly in accordance with the Manufacturer's instructions. Pipe barrels shall be continuous contact with the trench bed when laid.

All materials for bed and side fill to UPVC drain pipes shall be hard granular material passing 20 mm sieve and containing not more than 5% fines passing 3 mm sieve, composed of crushed stone, quarry waste, ballast or gravel with a compaction factor of 0.3 or less.

### **E. CAST IRON DRAIN PIPES**

Cast iron drain pipes shall be coated cast iron spigot and socket pipes conforming with B.S. 437 in all respects and with fittings to B.S. 1130. Pipes shall be jointed with asbestos yarn and caulked with molten lead or jointed with special jointing compound, all to approval.

**A. SPUN CONCRETE CYLINDRICAL DRAIN PIPES AND FITTINGS**

Spun concrete drain pipes shall be to B.S. 556, Part 2, of approved manufacture.

Flexibly jointed pipes shall have spigot and socket joints made with rubber joint rings to B.S. 2494, Part 2.

Rigidly jointed pipes shall have spigot and socket joints made with proprietary rubber gasket or three turns of tarred gaskin or tallowed yarn caulked to not more than one quarter of the socket joint and cement mortar 1:2 struck off at 45 degrees.

**B. uPVC DRAIN PIPES AND FITTINGS**

uPVC Drain pipes and Fittings shall be to B.S. 4660 of approved manufacture, with lip seal socketed joints, laid strictly in accordance with the manufacturers' instructions.

**C. BACKFILLING**

The first backfilling of pipe trenches is to be of soft material free from stones and shall be watered and carefully tamped over and around the pipes in 300 mm layers until they are covered to a depth of 600 mm. Subsequent filling is to be in 150 mm layers, watered and rammed. Only materials approved by the Architect are to be used as backfilling.

Where hardcore is used for backfilling it is not to exceed 150 mm gauge and all interstices shall be properly filled with small pieces and fine binder. Surplus excavated materials are to be removed from the Site.

If, in the opinion of the Architect, care has not been exercised in refilling trenches, he may order a fresh test to be made on the drain. In the event of the drain failing to pass the test the Contractor will be required to remedy the fault at his own expense.

**D. CONCRETE BEDS AND SURROUNDS**

Concrete beds and surrounds shall be Class 25 concrete to the thicknesses and widths specified.

Where pipes are specified to be haunched, the concrete shall be carried up from the outside edge of the bed to meet the pipe barrel tangentially.

Where pipes are specified to be surrounded, the concrete shall be carried up from the bed in a square section with a minimum of 150 mm in thickness over the barrel of the pipe.

Rates for beds and surrounds shall include for forming recesses and filling with concrete, for mortar layer, etc., and for any necessary formwork.

**A. LAYING PIPES**

Each pipe shall be carefully examined on arrival, any defective pipes shall be removed immediately from the Site and not used in the Works. Minor damage to the protective coating of cast iron pipes shall be made good by painting with hot tar; if major defects in the coating exist, such pipes shall be rejected and removed from the Site.

Drains shall be laid in straight lines and to even gradients as required and to the satisfaction of the Architect.

Great care shall be exercised in setting out and determining the levels of the pipes and the Contractor shall provide suitable instruments and set up and maintain all sight rails, boning rods and bench marks, etc., necessary for the purpose.

All drains shall be kept free from earth, debris, superfluous cement and other obstructions or water during laying and until completion of the Contract when they shall be handed over in a clean condition.

Pipes shall be laid with the sockets leading uphill and shall rest on solid and even foundations for the full length of the barrel. Socket recesses shall be formed in the foundation, as short as practicable but sufficiently deep to allow the pipe jointer room to work right round the pipe. Such recesses shall be filled with cement mortar (1:4) on completion of laying.

**B. INSPECTION CHAMBERS**

Inspection chambers shall be constructed in the positions indicated on the Drawings or as required by the Architect. Such chambers shall be to the depths required to obtain even gradients in the drain and of sufficient size to contain the requisite main channel and any branches thereto and all to the entire satisfaction of the Architect and the Local Authority.

Rendering shall be trowelled smooth, coved at all internal angles and rounded on arrises.

**C. TESTING**

Each length of drain and manhole shall be tested as described hereinafter and approved by the Engineer before any backfilling of the trench takes place.

Testing shall not be carried out until at least 12 hours have elapsed after the jointing of the last pipe.

The test shall be as follows: -

- (i) The lower end of the pipe and all junctions shall be securely stoppered and the whole length under test filled with water.

### **Testing (Continued)**

- (ii) When full, a further stopper shall be inserted at the top leaving a pipe attached to the drain plug. This pipe shall be bent through 90 degrees and shall terminate in a header tank 225 mm square. The vertical distance between the centre line of the drain plug and the top of the header tank shall be not less than 900 mm.
- (iii) Water shall then be poured into the header tank, which shall be kept full for a minimum period of 3 hours to allow absorption to take place. At the expiration of this period the header tank shall be topped up and the testing of the drain commenced. If, after a further period of 30 minutes, the water level in the header tank has not fallen by more than 2 mm the test will be considered satisfactory.
- (iv) In the event of a pipe failing to withstand the test, the point of failure shall be completely surrounded, at the Contractor's expense, with Class 25 concrete 19 mm maximum aggregate, so that there is a minimum cover of 150 mm in all directions. The length shall then be re-tested.
- (v) Immediately a length of drain has been approved the trench shall be backfilled for a depth of at least 300 mm above the top of the pipes.

### **A. GULLEYS**

Gulleys shall be approved 100 mm salt glazed stoneware or cast iron trapped gulleys with 150 x 150 mm cast iron gratings to receive the wastes from waste fittings. Bed the gulleys on and surround with Class 25 concrete 100 mm thickness, carried up to form a 75 x 75 mm kerb with all exposed surfaces finished in cement and sand (1:2) trowelled hard and smooth and all angles rounded. Make good cement joint to drain pipe and run drain to adjacent manhole.

### **B. MEASUREMENT**

Drain pipes have been measured over all bends, junctions and other fittings, and the Contractor shall include in his prices for all joints, short lengths, cutting and waste. Prices for bends, junctions, etc., shall include for the extra joints, cutting and waste and any extra labour required.

## **PAINTING AND DECORATING**

### **A. APPROVED SPECIALIST**

All work under this trade must be executed by an approved Specialist.

### **B. GENERALLY**

The Contractor shall so arrange his programme of work that all other trades are completed and away from the area to be painted, when painting begins. Before painting the Contractor must remove all concrete and mortar droppings and the like from all work to be decorated and remove all stains from and obtain uniform colour to work to be oiled and polished.

All plaster, metal, wood or other surfaces, which are to receive, finishes of paint, stain, polish, distemper or paintwork of any description are to be carefully inspected by the Contractor before he allows any of his painters to commence work. The Contractor will be held solely responsible for all defective work condemned as a result of his Painter's failure to insist on receiving from the other trades surfaces in the proper condition to allow first-class finishes of the various kinds specified being applied to them.

### **C. PAINTING GENERALLY**

All materials are to be of the best quality and shall be of an approved proprietary brand selected from the latest Schedule of Approved Paints issued by the Ministry of Works.

All materials to be applied externally shall be of exterior quality and/or recommended by the manufacturers for external use.

All materials shall be delivered on Site intact in the original sealed drums or tins and shall be mixed and applied strictly in accordance with the manufacturers' instructions and to the approval of the Architect.

Unless specially instructed or approved by the Architect, no paints, distemper, etc., are to be thinned, or otherwise adulterated, but are to be used as supplied by the manufacturers and direct from the tins.

If required by the Architect the Contractor is to provide at his own expense samples of paints, etc., with containers and cases to be forwarded carriage paid by the Contractor for analysis to a laboratory.

The priming, undercoats and finishing coats shall each be of differing tints and the priming and undercoat shall be the correct brands and tints to suit the respective finishing coats, in accordance with the manufacturer's instructions. All finishing coats shall be of colours and tints selected by the Architect. Each coat must be approved by the Architect before the next coat is applied.

Each coat shall be properly dry and in the case of oil or enamel paints shall be well rubbed down with fine glass paper before the next coat is applied. The paintwork shall be finished smooth and free from brush marks.

Colour cards of all paints, etc., shall be submitted to, and samples prepared for approval of the Architect before laying on, and such samples, when approved, shall become the standard for work.

All paints, emulsion paints, and distempers shall be applied by means of a brush or spray gun or rollers of an approved type, where so agreed by the Architect.

Preambles  
Painting, etc.



### **Painting Generally (Continued)**

No painting is to be done in wet weather or on surfaces, which are not thoroughly dry.

Prices of paint, distemper, etc., shall include for preparation of surfaces, rubbing down between each coat, stopping, knotting, etc., and all other work in connection and as described and as necessary to obtain a first-class and proper finish to approval.

Emulsion paint on ceilings and all undercoats of emulsion paint and complete oil painting on walls shall be completed before thermoplastic floorings are laid. Final coats of emulsion paints on walls shall be applied after such flooring has been laid complete.

#### **A. SAMPLES**

The Contractor shall furnish at the earliest possible opportunity before work commences and at his own cost, samples of painting for the Architect's approval and any further samples in the case of rejection until such samples are approved by the Architect and such samples, when approved, shall be the minimum standard for the work to which they apply.

The Architect may reject any materials or workmanship not in his opinion up to the approved sample, and these must be removed from the Site without delay.

Preambles  
Painting, etc.

**A. WOOD PRESERVATIVE**

All woodwork in contact with walling or plaster shall be treated after cutting and preparation but before assembly or fixing with one coat of "TIMCIDE" wood preservative manufactured by Timsales Ltd., P.O. Box 18080, Nairobi. The solution is to be brushed on all faces of all timbers, unless exposed to view and painted.

The Contractor shall note that this solution is POISONOUS and shall take all necessary precautions and instruct his workmen accordingly.

**B. WAX POLISH**

Wax polish shall be furniture polish of an approved brand and wood surfaces shall be clean, smooth, free from oil or grease or any other blemishes. A minimum of two coats shall be applied to approval.

**C. PREPARATION AND PRIMING OF PLASTER, ETC., SURFACES**

Plaster surfaces shall be perfectly smooth, free from defects and ready for decoration. All such surfaces shall be allowed to dry for a minimum period of six weeks, stopped with approved plaster compound stopping and rubbed down flush, as necessary, and then be thoroughly brushed down and left free from all efflorescence, dirt and dust immediately prior to decorating.

Plaster surfaces which are to be finished with emulsion, oil or enamel paint, shall be primed with an alkali resisting primer complying with the particular paint manufacturer's specification and applied in accordance with their instructions.

Fibreboard or similar surfaces shall be lightly brushed down to remove all dirt, dust and loose particles and have all nail holes or other defects stopped with an approved plaster compound stopping rubbed down flush and left with a texture to match surrounding material and shall receive one coat petrifying liquid as last.

**D. PREPARATION AND PRIMING OF METAL, ETC., SURFACES**

All surfaces shall be thoroughly brushed down with wire brushes and scraped where necessary to remove all scale, rust, etc., immediately prior to decorating. Where severe rust exists and if approved by the Architect a proprietary de-rusting solution may be used in accordance with the manufacturer's instructions.

Shop-primed and unprimed surfaces shall be given one coat of metal chromate primer.

Galvanised surfaces shall be treated before painting with an approved proprietary mordant or de-greasing solution before priming.

Coated surfaces already treated with bituminous solution shall be scraped to remove soft parts and then receive two isolating coats of aluminium primer or other approved anti-tar primer.

Preambles  
Painting, etc.

**A. PREPARATION AND PRIMING OF WOODWORK**

All woodwork shall be rubbed down, all knots covered with a thick coat of good shellac or aluminium knotting; primed with one coat of approved ready-mixed proprietary wood primer and all cracks, nail holes, defects and uneven surfaces, etc., stopped and faced up with hard stopping rubbed down flush.

**B. PREPARATION OF PREVIOUSLY PAINTED METAL SURFACES**

Thoroughly wash down with water containing an approved cleansing agent and rinse with clean water. Wire brush to remove all rust and loose paint and touch up bare patches with zinc-rich primer.

**C. PREPARATION OF PREVIOUSLY PAINTED WOODWORK**

Thoroughly wash down with water containing an approved cleansing agent and rinse with clean water. Lightly rub down with glass paper and prime and bring forward all bare patches for decoration.

**D. PREPARATION OF PREVIOUSLY PAINTED PLASTER, ETC., SURFACES**

Thoroughly wash down with water containing an approved cleansing agent and rinse with clean water. Cut out small cracks and other blemishes and fill with an approved plaster compound stopping rubbed down flush. Bring forward all bare patches for decoration.

**E. EMULSION PAINT**

After preparation as specified above a minimum of THREE coats, unless otherwise specified, shall be applied using a thinning medium of water only if and as recommended by the manufacturer.

An approved plaster primer tinted to match may be substituted for the first coat in three-coat work.

A. **ENAMEL PAINT**

Apply two undercoats and one finishing coat, after preparation and priming as specified above.

B. **CLEAR POLYURETHANE VARNISH**

Surfaces are to be treated with "Ronseal" or other equal and approved, in three coats. The first coat is to be applied with a linen pad and well rubbed in and second and successive coats are to be applied by brush. The first and second coats are to be lightly rubbed with Grade 'O' and Grade 'OO' wire wool respectively.

C. **POLYURETHANE CLEAR LACQUER**

To be applied strictly as per the manufacturer's instructions.

D. **IRONMONGERY**

All ironmongery shall be removed from joinery, steel windows and louvres before painting is commenced, and shall be cleaned and renovated if necessary and refixed after completion of painting.

E. **PAINTING ITEMS**

Painting items, as billed hereafter shall include for preparing all priming surfaces as above described.

F. **COVER UP**

Cover up all floors, fittings, etc., with dust sheets when executing all painting and decorating work.

G. **CLEAN AND TOUCH UP**

Paint splashes, spots and stains shall be removed from floors, woodwork, etc., any damaged surfaces touched up and the whole of the work left clean and perfect upon completion.

Preambles  
Painting, etc.

## **EXTERNAL WORKS**

### **DRIVEWAY AND PARKING AREAS**

#### **A. EXCAVATIONS**

Excavations to areas to receive bitumen macadam or other road or paved finish shall be carried out in a manner ensuring that excavation plant and vehicles do not cause shear failure more than 250 mm in the sub-grade. Wheel loads and tyre pressures shall be limited and work shall be interrupted to let the sub-grade dry out as necessary to avoid such sub-grade failure.

If shear failure more than 250 mm deep occurs in the sub-grade, the soil affected shall be excavated and replaced by soil filling as described.

If the soil develops a highly elastic condition as excavation approaches formation level, excavations shall be interrupted until the excess pore consequently disappears.

Before any further work is executed the formation level must be inspected and approved by the Engineer.

#### **B. COMPACTION**

The sub-grade shall be compacted by a smooth-wheeled roller of 8 to 10 tonnes weight or vibrating roller of minimum 1,300 Kg., or other approved plant. The number of coverages shall be at least 10 and there shall be a 50% overlap of successive coverages. If so instructed by the Engineer, water shall be added during compaction to obtain optimum water content. Filling shall be compacted as above but in maximum 200 mm deep layers.

#### **C. SUB-GRADE SURFACE FINISH**

The surface of the sub-grade shall be finished to the levels, falls and crossfalls shown on the Drawings within the following tolerances:-

- (i) The level shall not be above and not more than 50 mm below the level shown on the Drawings.
- (ii) The falls shall be within 10% of the falls shown on the Drawings.
- (iii) The smoothness shall be such that departures from a 3 metre straight edge laid in any direction shall not exceed 50 mm and there shall be no ponding of water.

**A. COARSE AGGREGATE**

Coarse aggregate for the base shall be crushed stone or rock conforming to the following requirements:-

- (i) It shall be from sound, hard, igneous rock, limestone, quartzite or hard coral, and shall be free from weathered or disintegrated stone, clay, organic or other foreign matter.
- (ii) The shape shall be roughly cubical and the grading shall conform to: -

Passing 75 mm standard sieve: 100%

Passing 38 mm standard sieve: 20 - 80%

Passing 19 mm standard sieve: 0 - 20%

**B. CRUSHER DUST**

Crusher dust shall mean material in accordance with the table for 5 mm nominal maximum size below.

B.S. Sieve Size	Percentage Passing
5 mm	100
No. 7	80 - 100
No. 14	50 - 80
No. 25	30 - 60
No. 52	20 - 45
No. 200	10 - 25

**Notes: -**

- (i) Not less than 10% shall be retained between each pair of successive sieves specified for use, excepting the largest pair.
- (ii) The material passing the No. 36 sieve shall have the following characteristics (B.S.377): -
  - Liquid Limit not exceeding 25%
  - Plasticity Index not exceeding 8%

A. **CRUSHER FINES (2 to 10 mm)**

All the material in crusher fines shall pass the 13 mm B.S. sieve and be retained on the No. 25 B.S. sieve, evenly graded with no excess of any size.

B. **SUB-BASE**

The material for use in the sub-base shall consist of crusher dust as described, or other approved material. It shall be placed in one layer of such thickness that when compacted it shall attain the finished thickness shown on the Drawings. The material shall be watered as necessary and compacted as described. The sub-base material shall have a CBR value (unsoaked) of not less than 25.

C. **BASE**

The material for use in the basecourse shall consist of one layer of coarse aggregate as described of which the interstices are filled with fine material consisting either of crusher dust or a mixture of crusher fines. The proportions of crusher dust and crusher fines in the fine material shall be such as to obtain the maximum density of basecourse when compacted.

The procedure for construction shall be as follows: The coarse aggregate shall be placed in a layer of such thickness so as to obtain the required thickness after compaction. It shall then be compacted lightly until the Engineer is satisfied that a layer true to shape and level has been obtained. The fine material shall then be spread over the layer by hand or by mechanical means. The application of fine material shall be made gradually in successive layers not exceeding 25 mm in thickness and each layer shall be worked into the voids in the coarse aggregate before the application of the succeeding layer. The fine material shall be laid as described and brushed into the coarse aggregate and rolled and consolidated by an approved vibrating roller to feed fines to the bottom of the layer.

Additional blinding material shall be applied as above until the surface will accept no more. In no case shall the blinding material be applied so thickly that it cakes or bridges on the surface in such a manner as to prevent the direct bearing of the roller or other compacting plant on the stones.

Final compaction shall be by an 8 - 10 tonnes smooth-wheeled roller until there is no visible movement under the action of the roller and until the required tolerances are achieved. Water may be applied during final compaction subject to the Engineer's approval.

Compaction shall in any case achieve 100% maximum dry density in accordance with B.S. 1377.

**A. QUARRY WASTE**

Quarry waste shall mean material to the same specification as crusher dust, except as follows:-

- (i) The Plasticity Index taken on material passing the No. 36 sieve shall not exceed 16%
- (ii) The material may have up to 35% of stones not larger than 38 mm, provided that the material passing the 5 mm sieve is within the limits specified.

Quarry waste shall be clean and completely free from earth, organic or other foreign matter.

**B. BASECOURSE FINISH**

The surface of the basecourse shall be finished to the levels, falls and crossfalls shown on the Drawings subject to the following tolerances:-

- (i) The level shall be within + or - 12 mm of the levels shown on the Drawings.
- (ii) The falls shall be within 10% of the falls shown on the Drawings.
- (iii) The smoothness shall be such that departures from a 3 metre straight edge laid in any direction shall not exceed 12 mm.

The surface of the basecourse shall be inspected and approved by the Engineer before bitumen paving is commenced.

**C. BITUMEN PRIMING COAT**

Immediately before applying the priming coat, the surface of the basecourse shall be brushed free from dust and loose stones. The material for the priming coat shall be a cutback bitumen of M.C.O. grade or other approved.

Approximately 30 minutes before applying the priming coat the surface of the basecourse should be made slightly damp by use of a water spray. The priming coat shall be applied at a temperature of 100 - 150 degrees Fahrenheit and at a rate of 0.60 litres per square metre.

After application of the primer, a period of at least two days shall elapse before the road surfacing is applied. During this period all traffic shall be kept off the treated surface.



## A. BITUMEN MACADAM SURFACING

A single course open graded premix of 30 mm to 40 mm compacted thickness shall be used, with a seal coat.

Coarse aggregate shall be crushed blacktrap with particles having a cubicle shape to the Engineer's approval and shall be washed free from dust.

The coarse aggregate gradings shall be: -

Sieve Size	Percentage Passing
19 mm	100
13 mm	60 - 100
10 mm	45 - 70
6 mm	30 - 50
4 mm	25 - 40
4 mesh	15 - 25
8 mesh	2 - 5
200 mesh	

The binder shall be Shellmac MC/RC2 or other approved. The percentage by weight of binder shall be 4.5% Mixing shall be in an approved mixer and mixing shall proceed until the stone is evenly coated with binder. The temperature (at mixing) shall be within the following range: -

Aggregate	Binder
Mixing Temperature: 50° - 95°F	125° - 150°F

The laying temperature shall be not less than 20° F below the mixing temperature.

The mix shall be spread evenly over the primed surface and shall be thoroughly compacted by rolling with a minimum of 6 passes. A smooth- wheeled roller of not less than 5 tonnes weight and with rear wheel loading of 0.25 Kg. per square millimetre width shall be used.

**A. ROLLING**

Any longitudinal joints shall be rolled first, after which rolling shall start longitudinally at the side and proceed towards the centre of the carpet. Each pass of the roller shall overlap the preceding one by at least one half width of the rear wheel. Alternate passes of the roller shall be of varying length. Immediately following initial compaction, the surface shall be checked with a straight edge to ensure that it meets the surface finish requirements. Minor variations shall be corrected by rolling, but major imperfections shall be compacted by adding or taking away mix while it is still workable.

**B. SURFACE FINISH**

The surface of the bitumen macadam shall be finished to the levels, contours and slopes shown on the Drawings with the following tolerances: -

- (i) The level shall be within + or - 6 mm of the level shown on the Drawings.
- (ii) The gradient shall be within 10% of the gradient shown on the Drawings.
- (iii) The smoothness shall be such that departures from a 3 metre straight edge laid in any direction shall not exceed 6 mm.

**C. SEAL COAT**

The seal coat shall consist of precoated fines consisting of crushed blacktrap stone graded from 3 mm to dust, or coarse sand. The binder shall consist of 4.5% by weight of MC/RC2. The seal coat shall be spread and brushed into the macadam surface at the rate of 180 square metres per tonne and compacted by rolling as for the macadam.

## **EXTERNAL WORKS**

### **FENCING**

#### **A. CONCRETE POSTS AND STRUTS, GENERALLY**

Concrete posts and struts shall be manufactured to BS 1722:Part 1, Appendix A by an approved manufacturer, using Concrete Class 20 (10 mm), and reinforced in accordance with the following table: -

Intermediate posts not exceeding 2450 mm long	4No. 6mm bars
Intermediate posts exceeding 2450 mm long	4No. 8mm bars
Straining posts not exceeding 2450 mm long	4No. 8mm bars
Straining posts exceeding 2450 mm long	4No. 10mm bars
Struts not exceeding 2450 mm long	4No. 6mm bars
Struts exceeding 2450 mm long	4No. 8mm bars

Bars shall be made up into cages with 12 swg stirrups at centres not exceeding 380 mm. Bars shall extend to 25 mm from the end of the post or strut and have minimum cover of 16 mm.

#### **B. CONCRETE POSTS AND STRUTS FOR CHAINLINK FENCES**

Concrete posts and struts for chainlink fences shall be to B.S. 1722:Part 1, Table 3.

#### **C. CONCRETE POSTS AND STRUTS FOR STRAINED WIRE FENCES**

Concrete posts and struts for strained wire fences shall be to B.S. 1722: Part 3, Table 2.

#### **D. STEEL ANGLE POSTS AND STRUTS GENERALLY**

Steel angle posts and struts shall be to B.S. 1722: Part 1 & 3. Angles shall be to B.S. 4: Part 1 and B.S. 4360 with ends ragged for casting in and supplied primed with one coat of red oxide to B.S. 2524.

#### **E. STEEL HOLLOW SECTION POSTS AND STRUTS**

Steel hollow section posts and struts shall be to B.S. 1722: Part 1 & 3. Sections shall be to B.S. 4: Part 2 and B.S. 4360 with ragged ends for casting in and supplied primed with one coat of red oxide to B.S. 2524.

## **EXTERNAL WORKS**

### **FENCING**

#### **A. STEEL TUBE POSTS AND STRUTS**

Steel tubes for posts and struts shall be to B.S. 1775, with ragged ends for casting in and supplied primed with one coat of red oxide to B.S. 2524.

#### **B. STEEL ANGLE, HOLLOW SECTION AND TUBE POSTS AND STRUTS FOR CHAINLINK FENCING**

Steel angle, hollow section and tube posts and struts for chainlink fencing shall be to B.S. 1722: Part 1, Tables 4A and 4B.

#### **C. TIMBER POSTS AND STRUTS FOR STRAINED WIRE FENCING**

Timber posts and struts for strained wire fencing shall be cedar of diameters specified, reasonably straight and free from bark and excessive sapwood with tops cut at a slight angle to shed water. Straining posts shall be notched for struts.

#### **D. GALVANISED LINE WIRE**

Galvanised line wire for chainlink fencing shall be B.S. 4102 of the following diameters:-

Medium pattern chain link	3 mm
Heavy pattern chain link	3.55 mm
Extra heavy pattern chain link	4 mm

Galvanised line wire for strained wire fencing shall be to B.S. 4102 and 4mm diameter.

#### **E. GALVANISED TYING WIRE**

Galvanised tying shall be to B.S. 4102 and 2 mm diameter.

#### **F. GALVANISED BARBED WIRE**

Galvanised barbed wire shall be to B.S. 4102 of two strands of 2.5 mm line wire with barbs of 2 mm point wire at centres not exceeding 90 mm.

## **EXTERNAL WORKS**

### **FENCING**

#### **A. GALVANISED CHAINLINK**

Galvanised chainlink shall be to B.S. 4102: Table 6 of the pattern specified, of 50 mm mesh and of the following wire diameters:-

Medium pattern chain link      2.5 mm

Heavy pattern chain link      3 mm

Extra heavy pattern chain link      3 mm

#### **B. EXTENSION ARMS**

Extension arms for barbed wire shall be of mild steel to B.S. 1722: Part 1, cranked at 45 degrees and slotted for three strands of barbed wire at centres not exceeding 150 mm.

Arms for concrete, steel and timber intermediate posts shall be of 35 x 6 mm mild steel flat. Arms for concrete and timber straining posts shall be of 50 x 50 x 6 mm mild steel angle. Arms for steel straining posts shall be of similar section to the post.

#### **C. SUNDRIES**

Galvanised steel eye bolt strainers and winding brackets shall be to B.S.1722.

Bolts, nuts and washers shall be ISO metric to B.S. 4190.

Galvanised wire staples shall be to B.S. 1494: Part 2: - 9 s.w.g. x 32 mm.

Black bitumen coating solution shall be to B.S. 3416: Type 1.

#### **D. PREPARING POSTS**

Timber posts shall be drilled for line wire at the height specified, notched for struts in the top third of the exposed pole, and coated at the bottom end with bitumen to a height 300 mm above ground level.

Steel posts and struts shall be drilled for connection by two 10 mm diameter bolts at a point in the top third of the exposed post.

## **EXTERNAL WORKS**

### **A. FIXING POSTS**

Straining posts shall be provided at all ends and changes of direction or level and in straight runs at intervals not exceeding 50 metres.

Struts shall be fitted to straining post in the direction of each line of fencing.

Intermediate posts shall be provided at intervals not exceeding 3 metres.

Post and strut holes shall be excavated not less than 450 x 450 mm on plan: 600 mm deep for fences not exceeding 1400 mm high and 750 mm deep for fences exceeding 1400 mm high.

Concrete bases shall be as specified and not less than half the depth of the postholes.

Wires and fencing shall not exert strain until at least seven days after posts are fixed in bases.

### **B. FIXING LINE WIRES**

Lines wires shall be threaded through posts, connected to eye bolt strainers at ends and angles and strained taut to approval.

### **C. FIXING BARBED WIRE**

Barbed wire shall be slotted into steel extension arms, stapled to timber posts or wired firmly to concrete posts as specified and strained taut to approval.

### **D. FIXING CHAIN LINK**

Chain link fencing shall be wired firmly to each line wire at horizontal centres not exceeding 600 mm.

## **EXTERNAL WORKS**

### **LANDSCAPING**

#### **A. GENERAL PLANTING PREPARATION**

- a) All imported red soil and manure must be free of roots, weeds and debris. Manure is to be dry and well rotted. It must be either horse, cow or chicken manure.
- b) Remove all stones, branches and debris, etc. from planting areas.
- c) All lawn areas should be 15 mm higher than adjacent shrub beds and paved areas.
- d) Where possible, all planted areas must slope gently (1% slope) away from built structures unless specified.
- e) Grass seedlings/root cuttings must be free of weeds and any other species of grass.
- f) Trees and shrubs must be in a healthy condition and free from pests and diseases, with a well developed root-ball.

#### **B. LAWN INSTALLATION**

- a) Remove all natural debris and rocks larger than 40 mm in diameter.
- b) Cultivate to a depth of 250 mm to break up large lumps of soil. Mix the imported red soil with black cotton soil in 1:1 ratio (where necessary).
- c) Add 15 mm of very dry rotted manure to the surface of the soil and cultivate into the soil to a depth of 150 mm. Add 10gm of general fertilizer DAP per square metre and work into the soil.
- d) Grade and rake the surface of the soil to a smooth surface.
- e) Plant grass seedlings at a depth of 50 mm, exposing only a small amount of leaf, 100 mm apart.
- f) Water thoroughly.
- g) Water as required and remove weeds as soon as they appear.

## **EXTERNAL WORKS**

### **A. TREE, SHRUB AND GROUNDCOVER INSTALLATION**

- a) Excavate a hole not less than 750 mm deep and 900 mm wide for each shrub and 1000 mm deep and 1500 mm wide for each tree. (Where there are several shrubs planted together in a shrub bed, the entire area of the shrub bed is to be excavated). For groundcover, a depth of 300 mm is adequate.
- b) Remove soil and prepare a planting mixture as follows:
  - 6 parts good red topsoil
  - 1 part dry well rotted manure
  - 250 g general fertilizer (20:20:20) for shrubs and 500g for trees.
- c) Water the hole prior to backfilling.
- d) Return two-thirds of the soil mixture to the hole and make sure there are no air pockets.
- e) Remove plant from container and place in hole so that the soil mark around the stem of the plant is level with the top of the hole.
- f) Add rest of the soil mixture, firming gently.
- g) Raise the surface around the rim of the original hole to create a saucer for watering.
- h) Water the plant thoroughly.
- i) Stake the trees on windward side where necessary.



# PRELIMINARIES

PROPOSED PERIMETER WALL FOR KENGEN RETIREMENT BENEFITS SCHEME

PARTICULAR PRELIMINARIES

ITEM	DESCRIPTION	Kshs.	Cts
<b>A</b>	<b>PRICING ITEMS OF PRELIMINARIES</b>  Preliminaries to the contract are mandatory conditions and responsibilities the contractor is required to fulfill for the complete and proper execution of the contract. The contractor is advised to read and understand all his obligations under preliminary. Should he find fulfillment of any of the items will lead to him incurring any cost not covered under measured works he shall price such works accordingly otherwise failure to price any item will be construed to mean that the tenderer has included it in other priced items of the bill of quantities. Prices <b>SHALL BE INSERTED</b> against items of “preliminaries” in the tenderer’s priced Bills of Quantities.		
<b>B</b>	<b>DESCRIPTION OF THE WORKS</b>  The works to be carried out under this contract involves the <b>CONSTRUCTION OF A MASONRY PERIMETER WALL, GATE HOUSE AND A GATE IN REDHILL LIMURU FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME. APPROXIMATE LENGTH IS 1750 METRES</b>		
<b>C</b>	<b>MEASUREMENTS</b>  In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract documents shall immediately be referred to the PROJECT MANAGER in accordance with Clause 22 of the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 22 of the said Conditions.		
<b>D</b>	<b>LOCATION OF SITE</b>  The site is located I <b>KIAMBU COUNTY, REDHILL ALONG LIMURU ROAD</b> The Contractor is advised to visit all the sites, to familiarize with the nature and position of the site. No claims arising from the Contractor’s failure to do so will be entertained.		
	<b>Carried to Collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN RETIREMENT BENEFITS SCHEME

Item	DESCRIPTION	Kshs.	Cts
<b>A</b>	<b>CLEARING AWAY</b>  The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate and upon completion of the works, remove and clear away all plant, equipment, rubbish, unused materials and stains and leave in a clean and tidy state to the reasonable satisfaction of the Project Manager.  The whole of the works shall be delivered up clean, complete and in perfect condition in every respect to the satisfaction of the Project Manager.		
<b>B</b>	<b>CLAIMS</b>  It shall be a condition of this contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and/or expenses due to any of the contract conditions, or by any other reason whatsoever, he shall present such claim or intent to claim notice to the PROJECT MANAGER within the contract period. No claims shall be entertained upon the expiry of the said contract period.		
<b>C</b>	<b>PAYMENTS</b> The tenderer's attention is drawn to the fact that <b>KENGEN STAFF RETIREMENT BENEFITS SCHEME SHALL NOT MAKE ADVANCE PAYMENTS UNLESS STATED IN AGREEMENTS AND CONDITIONS OF THIS CONTRACT</b> and that KENGEN pays for work done and Materilas delivered on site; all in accordance with the conditions of contract agreement. in order to facilitate this, a list of general component elements for the works is given at the summary page of these specifications and the tenderer is requested to break down his tender sum commensurate to the said elements.		
<b>D</b>	<b>PREVENTION OF ACCIDENT, DAMAGE OR LOSS</b>  The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other normal activities. The Contractor is instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of normal activities being carried out by the Client. The Contractor shall allow in his rates any expense he deems necessary by taking such care within the site.		
<b>E</b>	<b>BID SECURITY</b> The contractor shall provide a bid security duly signed, sealed and stamped from an approved Bank of 1% of the bid value.		
<b>F</b>	<b>CONTRACT PRICE</b> This is a fixed price contract and therefore the tenderer shall not be riembursed for any increases in the costs of materials and/ or labour in the execution of the works.		
<b>G</b>	<b>MATERIALS FORM DEMOLITIONS</b>  Any materilas from demolitions shall not be re-used and shall become the property of the employer. The contractor shall allow in his rates for the cost of transporting, storing, and securing the materials on site as directed by the project manager.		
	<b>Carried to Collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN RETIREMENT BENEFITS SCHEME

Item	DESCRIPTION	Kshs.	Cts
<b>A</b>	<b>WORKING CONDITIONS</b>  Working hours shall be those generally adopted by good employers in the Building and Civil Engineering Trades in Kenya. The work must be carried out to cause the minimum inconvenience to the occupants of the adjoining premises.		
<b>B</b>	<b>SIGNBOARD</b>  Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away a signboard as designed, specified and approved by the Project Manager.		
<b>C</b>	<b>LABOUR CAMPS</b>  The Contractor shall not be allowed to house labour on site. Allow for transporting workers to and from the site during the tenure of the contract.		
<b>D</b>	<b>PRICING RATES</b>  The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.		
<b>E</b>	<b>QUALITY OF WORKS</b>  The works should be of high quality and the contractor will be required to make samples of the work to be executed for approval by the project manager before he commences the carrying out of the works. The contractor should allow for sample works in his rates accordingly. In case a sample does not meet the standards set by the project manager, the contractor shall be expected to make another sample at his cost until it is approved by the project manager.		
	<b>Carried to Collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN RETIREMENT BENEFITS SCHEME

Item	DESCRIPTION	Kshs.	Cts
<b>A</b>	<b>SECURITY</b>  The Contractor shall allow for providing adequate security for the works and the workers in the course of execution of this contract. No claim will be entertained from the Contractor for not maintaining adequate security for both the works and workers.		
<b>B</b>	<b>URGENCY OF THE WORKS</b>  The Contractor is notified that these works should be completed within the period stated in the form of tenderer. The Contractor shall allow in his rates for any costs he deems that he/she may incur by having to complete the works within the contract period.		
<b>C</b>	<b>PAYMENT FOR MATERIALS ON SITE</b>  All materials for incorporation in the works must be stored on site before payment is effected, unless specifically exempted by the Project Manager. This is to include materials of the Contractor, nominated sub-Contractors and nominated suppliers.		
<b>D</b>	<b>EXISTING SERVICES</b>  Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the area and he/she shall make whatever provisions may be required by the authorities concerned for the support, maintenance and protection of such services.		
<b>E</b>	<b>PRICING OF PRELIMINARIES</b>  The tenderer is required to price the items covered in these preliminaries as items for which no price is entered will not be paid for but shall be deemed covered by other rates and prices in these Bills of Quantities.		
<b>F</b>	<b>ADJOINING PROPOERTY</b>  Take all precautions to prevent damage to adjoining property. Any damage occurring must be made good to the satisfaction of the project Manager and /or owner(s) of adjoining property at the contractor's expense.		
<b>G</b>	<b>USE OF SITE</b>  Do not use the site for any purpose other than carrying out the works. Do not permit or display any advertisement without the consent of the project manager		
	<b>Carried to Collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN RETIREMENT BENEFITS SCHEME

Item	DESCRIPTION	Kshs.	Cts
<b>A</b>	<b>PERFORMANCE BOND</b> A bond of 10 % of the contract sum will be required in accordance with Clauses in the award of contract of the Instructions to Tenderer's. No payment on account for the works executed will be made to the contractor until he has submitted the Performance Bond to the Project Manager duly signed, sealed and stamped from an approved Bank.		
<b>B</b>	<b>TENDER DOCUMENTS</b> Tender documents are as listed in tender documents		
<b>C</b>	<b>DELIVERY OF TENDER</b> Tenders and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited at the offices as specified in the letter accompanying these documents or as indicated in the advertisement.  Tenders will be opened at the time specified in the letter accompanying these Tender Documents or as indicated in the advertisement. Tenders delivered/received later than the above time will not be opened.		
<b>D</b>	<b>VALUE ADDED TAX</b>  The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1 <sup>st</sup> September, 1993 which requires payment of VAT on all contracts. The tenderer is advised that in accordance with Government public notice No. 35 & 36 Dated 11 <sup>th</sup> September 2003 operational from 1 <sup>st</sup> October 2003, withholding VAT will be levied against the contract sum by the Employer and remitted to the Commissioner of VAT through all interim certificates. The contractor should therefore include this tax in the Grand Summary page as indicated herein.		
<b>E</b>	<b>CORRECTION OF ERRORS IN TENDER</b> Arithmetical errors will be rectified as follows ; If there is a discrepancy between the unit price and the total prices that is obtained by multiplying the unit price and the quantity, the unit price shall prevail and the total price shall be corrected.  If there is a discrepancy between words and figures, the amount in words will prevail.		
<b>F</b>	<b>STANDARD FORMS</b> Any tenderer with standard forms not filled as appropriate will be treated as non responsive		
<b>G</b>	<b>TENDER VALIDITY</b> Tenders shall remain valid for a period of One Hundred and Twenty (120) days from the date of submission.		
	<b>Carried to Collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN RETIREMENT BENEFITS SCHEME

Item	DESCRIPTION	Kshs.	Cts
	<p><b><u>PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO CONTRACT AGREEMENT</u></b></p> <p>The following are the insertions to be made in the appendix to the contract Agreement</p> <p>Period of Final Measurement                      3 Months From taking Over Certificate</p> <p>Defects Liability Period                              6 Months from Practical Completion</p> <p>Date of Commencement                              To be agreed with the Project Manager</p> <p>Date for Completion                                  .....Weeks from date of Commencement</p> <p>Liquidated Damages                                  At the agreed rate per Week or part thereof</p> <p>Prime cost sums for wich the contractor desires to tender</p> <p>.....</p> <p>Period of interim certificates                      30 Days</p> <p>Period of Honouring Certificates                      30 Days</p> <p>Percentage of certified value Retained                      5 %</p> <p>Limit of Retention Fund                                  5%</p>		
	Carried to Collection		

PROPOSED PERIMETER WALL FOR KENGEN RETIREMENT BENEFITS SCHEME

Item	DESCRIPTION	Kshs.	Cts
	<p><u><b>COLLECTION</b></u></p> <p>Brought forward from page PP/1</p> <p>Brought forward from page PP/2</p> <p>Brought forward from page PP/3</p> <p>Brought forward from page PP/4</p> <p>Brought forward from page PP/5</p> <p>Brought forward from page PP/6</p>		
	<b>PARTICULAR PRELIMINARIES CARRIED TO BILL No.1 SUMMARY</b>		



PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
	<p style="text-align: center;"><b>GENERAL PRELIMINARIES</b></p> <p><b>A. PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES</b></p> <p><b>Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specification.</b></p> <p>Preliminaries to the contract are mandatory conditions and responsibilities the contractor is required to fulfill for the complete and proper execution of the contract. The contractor is advised to read and understand all his obligations under preliminary. Should he find fulfillment of any of the items will lead to him incurring any cost not covered under measured works he shall price such works accordingly otherwise failure to price any item will be construed to mean that the tenderer has included it in other priced items of the bill of quantities. Prices <b>SHALL BE INSERTED</b> against items of "preliminaries" in the tenderer's priced Bills of Quantities.</p> <p><b>B. ABBREVIATIONS</b></p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows:-</p> <p><i>C.M.</i>                      Shall mean cubic metre</p> <p><i>S.M.</i>                      Shall mean square metre</p> <p><i>L.M.</i>                      Shall mean linear metre</p> <p><i>MM</i>                        Shall mean Millimetre</p> <p><i>Kg.</i>                        Shall mean Kilogramme</p> <p><i>No.</i>                        Shall mean Number</p> <p><i>Prs.</i>                        Shall mean Pairs</p> <p><i>B.S.</i>                        Shall mean the British Standard Specification Published by the British Standards Institution, 2 Park Street, London W.I., England.</p> <p><i>Ditto</i> Shall mean the whole of the preceding description except as qualified in the description in which it occurs.</p> <p><i>m.s.</i>                        Shall mean measured separately.</p> <p><i>a.b.d</i>                        Shall mean as before described.</p>		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<p><b>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</b></p> <p><i>Attendance</i> ; Clause B19(a) of the Standard Method of Measurement is deleted and the following clause is substituted:-</p> <p>Attendance on nominated Sub-Contractors shall be given as an item in each case shall be deemed to include: allowing use of standing scaffolding, mess rooms, sanitary accommodation and welfare facilities; provision of special scaffolding where necessary;providing space for office accommodation and for storage of plant and materials;providing light and water for their work: clearing away rubbish; unloading checking and hoisting: providing electric power and removing and replacing duct covers, pipe casings and the like necessary for the execution and testing of Sub- Contractors' work and being responsible for the accuracy of the same.</p> <p><i>Fix Only</i>:-</p> <p>"Fix Only" shall mean take delivery at nearest railway station (Unless otherwise stated), pay all demurrage charges, load and transport to site where necessary, unload, store, unpack, assemble as necessary, distribute to position,</p> <p><b>B. EMPLOYER</b></p> <p>The "Employer" is <b>KenGen Staff Retirement Benefits Scheme</b></p> <p>The term "Employer" and "Government" wherever used in the contract document shall be synonymous</p> <p><b>C. PROJECT MANAGER</b></p> <p>be <b>AEGIS DEVELOPMENT SOLUTIONS LIMITED</b> or such person or persons as may be duly authorised to represent him on behalf of the Procuring Entity.</p> <p><b>D SUPERVISING CONSULTANTS</b></p> <p>The supervising Consultants shall be <b>AEGIS DEVELOPMENT SOLUTIONS LIMITED</b></p>		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A</b>	<p><b>FORM OF CONTRACT</b></p> <p>Standard Tender Document for Procurement of Building and Civil Works(2021 Edition) included herein The Conditions of Contract are also included herein <b>Conditions of Contract</b> These are numbered from 1 to 37 as set out in pages 18 to 38 of these tender documents.Particulars of insertions to be made in the Appendix to the Contract Agreement will be found in the Particular Preliminaries part of these Bills of Quantities</p>		
<b>B</b>	<p><b>PERFOMANCE BOND.</b></p> <p>The Contractor shall find and submit on the Form of Tender an <b>approved bank</b> and who will be willing to be bound the Government in and amount equal to ten per cent (10%) of the Contract amount for the due performances of the Contract up to the date of completion as certified by the PROJECT MANAGER and who will when and if called upon, sign a Bond to that effect on the relevant standard form included herein. (without the addition of any limitations) on the same day as the Contract Agreement is signed, by the Government, the Contractor shall furnish within seven days another Surety to the approval of the Government.</p>		
<b>C</b>	<p><b>PLANT, TOOLS AND VEHICLES</b></p> <p>Allow for providing all scaffolding, plant, tools and vehicles required for the worksexcept in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.</p>		
<b>D</b>	<p><b>TRANSPORT.</b></p> <p>Allow for transport of workmen, materials, etc., to and from the site at such hours and by such routes as may be permitted by the competent authorities.</p>		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A</b>	<p><b>MATERIALS AND WORKMANSHIP.</b></p> <p>All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that they are onsite when required for use in the works. The Bills of Quantities shall not be used for the purpose of ordering</p>		
<b>B</b>	<p><b>SIGN FOR MATERIALS SUPPLIED.</b></p> <p>The Contractor will be required to sign a receipt for all articles and materials supplied by the PROJECT MANAGER at the time of taking deliver thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacements of any such loss or damage with articles and/or materials which will be supplied by the PROJECT MANAGER at the current market prices including Customs Duty and V.A.T., all at the Contractor's own cost and expense, to the satisfaction of the PROJECT MANAGER</p>		
<b>C</b>	<p><b>STORAGE OF MATERIALS</b></p> <p>The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the PROJECT MANAGER Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.</p>		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A. SAMPLES</b>	<p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the PROJECT MANAGER for his approval until such samples are approved by the PROJECT MANAGER and the PROJECT MANAGER, may reject any materials or workmanship not in his opinion to be up to approved samples. The PROJECT MANAGER shall arrange for the testing of such materials as he may at his discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the PROJECT MANAGER. The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by the Ministry of Roads, Housing and Public Works.</p> <p>The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the PROJECT MANAGER The Contractor shall allow in his tender for such samples and tests except those in connection with nominated sub-contractors' work.</p>		
<b>B. GOVERNMENT ACTS REGARDING WORKPEOPLE ETC.</b>	<p>Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health and welfare of the workpeople. The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps , passes for transport, etc. It is most important that the Contractor, before tendering, shall obtain from the relevant Authority the fullest information regarding all such regulations and/or restrictions which may affect the information regarding all such regulations and/or restrictions which may affect the organisation of the works, supply and control of labour, etc., and allow accordingly in his tender.</p> <p>entertained.</p>		
<b>C. SECURITY OF WORKS ETC.</b>	<p>The Contractor shall be entirely responsible for the security of all the works stores, materials, plant, personnel, etc., both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.</p>		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<b>PUBLIC AND PRIVATE ROADS.</b>  Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority and the PROJECT MANAGER		
<b>B.</b>	<b>EXISTING PROPERTY.</b>  The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the PROJECT MANAGER		
<b>C.</b>	<b>VISIT SITE AND EXAMINE DRAWINGS.</b>  The Contractor is recommended to examine the drawings and visit the site the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which, may affect his tender. No claim arising from his failure to comply with this recommendation will be considered.		
<b>D.</b>	<b>ACCESS TO SITE AND TEMPORARY ROADS.</b>  Means of access to the Site shall be agreed with the PROJECT MANAGER prior to commencement of the work and Contractor must allow for building any necessary temporary access roads (approximately 70 metres long) for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the Site. Upon completion of the works, the Contractor shall remove such temporary access roads; temporary culverts, bridges, etc., and make good and reinstate all works and surfaces disturbed to the satisfaction of the PROJECT MANAGER		
<b>E.</b>	<b>AREA TO BE OCCUPIED BY THE CONTRACTOR</b>  The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on site by the PROJECT MANAGER		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<p><b>OFFICE ETC. FOR THE PROJECT MANAGER</b></p> <p>The Contractor shall provide, erect and maintain where directed on site and afterwards dismantle the site office of the type noted in the Particular Preliminaries, complete with Furniture. He shall also provide a strong metal trunk complete with strong hasp and staple fastening and two keys. He shall provide, erect and maintain a lock-up type water or bucket closet for the sole use of the PROJECT MANAGER including making temporary connections to the drain where applicable to the satisfaction of Government and Medical Officer of Health and shall provide services of cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition from commencement to the completion of the works and dismantle and make good disturbed surfaces. The office and closet shall be completed before the Contractor is permitted to commence the works. The Contractor shall make available on the Site as and when required by the "PROJECT MANAGER" a modern and accurate level together with levelling staff, ranging rods and 50 metre metallic or linen tape. The office shall be completely furnished and equipped with 3 No. branded desk top computers with atleast 2.90 GHZ, 1.87GB Ram with pentium 4 processor and FT monitor softwares, high internet speed and telephone connectivity for office use and hand over the equipment to Kenyatta National hospital upon Completion.</p> <p>The Office should be big enough to hold 20 people complete with furniture , an office for the clerk of works and a sample room</p>		
<b>B.</b>	<p><b>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</b></p> <p>The Contractor shall provide at his own risk and cost all necessary water, electric light and power required for use in the works. The Contractor must make his own arrangements for connection to the nearest suitable water main and for metering the water used. He must also provide temporary tanks and meters as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the PROJECT MANAGER . The Contractor shall pay all charges in connection herewith. No guarantee is given or implied that sufficient water will be available from mains and the Contractor must make his own arrangements for augmenting this supply at his own cost. Nominated Sub--contractors are to be made liable for the cost of any water or electric current used and for any installation provided especially for their own use.</p>		
<b>C.</b>	<p><b>SANITATION OF THE WORKS</b></p> <p>The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the PROJECT MANAGER</p>		
<b>D.</b>	<p><b>SUPERVISION AND WORKING HOURS</b></p> <p>in all respects of the PROJECT MANAGER who shall at all times during normal working hours have access to the works and to the yards and workshops of the Contractor and sub-Contractors or other places where work is being prepared for the contract.</p>		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<b>PROVISIONAL SUMS.</b>  have the meaning stated in Section A item A7(i) of the Standard Method of Measurement. Such sums are net and no addition shall be made to them for profit.		
<b>B.</b>	<b>PRIME COST (OR P.C.) SUMS.</b>  Quantities shall have the meaning stated in Section A item A7 (ii) of the Standard Method of Measurement . Persons or firms nominated by the PROJECT MANAGER to execute work or to provide and fix materials or goods are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described herein as Nominated		
<b>C.</b>	<b>PROGRESS CHART.</b>  agreement with the PROJECT MANAGER a Progress Chart for the whole of the works including the works of Nominated Sub-Contractors ; one copy to be handed to the PROJECT MANAGER and a further copy to be retained on Site. Progress to be recorded and chart to be amended as necessary as the work proceeds.		
<b>D.</b>	<b>ADJUSTMENT OF P.C. SUMS.</b>  In the final account all P.C. Sums shall be deducted and the amount properly expended upon the PROJECT MANAGER'S order in respect of each of them added to the Contract sum. The Contractor shall produce to the PROJECT MANAGER such quotations, invoices or bills, properly receipted, as may be necessary to show the actual details of the sums paid by the Contractor. Items of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid. Items of "attendance" (as previously described) following P.C. Sums shall be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid) and this shall apply even though the Contractor's priced Bill shows a percentage in the rate column in respect of them. Should the Contractor be permitted to tender and his tender be accepted of any work for which a P.C. Sum is included in these Bill of Quantities profit and attendance will be allowed at the same rate as it would be if the work were executed by a Nominated Sub-Contractor.		
	<b>Carried to collection</b>		



PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<p><b>ADJUSTMENT OF PROVISIONAL SUMS.</b></p> <p>In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the PROJECT MANAGER's order added to the Contract Sum. Such work shall be valued , but should any part of the work be executed by a Nominated Sub-Contractor, the value of such work or articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p>		
<b>B.</b>	<p><b>NOMINATED SUB-CONTRACTORS</b></p> <p>When any work is ordered by the PROJECT MANAGER to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts and shall thereafter be responsible for such sub-contractors in every respect. Unless otherwise described the Contractor is to provide for such Sub-Contractors any or all of the facilities described in these Preliminaries. The Contractor should price for these with the nominated Sub-contract Contractor's work concerned in the P.C. Sums under the description "add for Attendance".</p>		
<b>C.</b>	<p><b>DIRECT CONTRACTS</b></p> <p>Notwithstanding the foregoing conditions, the Government reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C. Sum the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.</p>		
<b>D.</b>	<p><b>ATTENDANCE UPON OTHER TRADESMEN, ETC.</b></p> <p>The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the PROJECT MANAGER and the work will be measured and paid for to the extent executed at rates provided in these Bills.</p>		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A. INSURANCE</b>	<p>The Contractor shall insure as required in Conditions No. 30 of the Conditions of Contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the PROJECT MANAGER either by production of an Insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clauses have been complied with in all respects. Thereafter the PROJECT MANAGER shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the PROJECT MANAGER's inspection.</p>		
<b>B. PROVISIONAL WORK</b>	<p>All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this Contract shall left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the PROJECT MANAGER Immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT MANAGER. If the Contractor makes default in these respects he shall if the PROJECT MANAGER so directs uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense.</p>		
<b>C. ALTERATIONS TO BILLS, PRICING, ETC.</b>	<p>Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted.</p>		
<b>D. BLASTING OPERATIONS</b>	<p>Blasting will only be allowed with the express permission of the PROJECT MANAGER in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the PROJECT MANAGER governing the use and storage of explosives.</p>		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<b>MATERIALS ARISING FROM EXCAVATIONS</b>  the Government. Unless the PROJECT MANAGER directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the PROJECT MANAGER Should such permission be given, the Contractor shall make due allowance for the value of the materials so used at a price to be agreed.		
<b>B.</b>	<b>PROTECTION OF THE WORKS.</b>  Provide protection of the whole of the works contained in the Bills of Quantities, including casing, casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the PROJECT MANAGER and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Government.		
<b>C.</b>	<b>REMOVAL OF RUBBISH ETC.</b>  Removal of rubbish and debris from the Buildings and site as it accumulates and at the completion of the works and remove all plant, scaffolding and unused materials at completion.		
<b>D.</b>	<b>WORKS TO BE DELIVERED UP CLEAN</b>  Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the PROJECT MANAGER		
	<b>Carried to collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
<b>A.</b>	<b>GENERAL SPECIFICATION.</b>  For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads and Public Works and Housing General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be allowed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.		
<b>B.</b>	<b>TRAINING LEVY</b>  The Contractor's attention is drawn to legal notice No. 237 of October, 1971, which requires payment by the Contractor of a Training Levy at the rate of 1/4 % of the Contract sum on all contracts of more than Kshs. 50,000.00 in value.		
<b>C.</b>	<b>MATERIALS ON SITE</b>  All materials for incorporation in the works must be stored on or adjacent to the site before payment is effected unless specifically exempted by the PROJECT MANAGER. This includes the materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.		
<b>D.</b>	<b>HOARDING</b> <i>Only Where necessary</i> The Contractor shall enclose the site or part of the works under construction with a hoarding 2400 mm high consisting of iron sheets on 100 x 50 mm timber posts firmly secured at 1800 mm centres with two 75 x 50 mm timber rails approximate distance 500 metres. The Contractor is in addition required to take all precautions necessary for the safe custody of the works, materials, plant, public and Employer's property on the site.		
<b>E.</b>	<b>CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</b>  Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Project Manager and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.		
<b>F</b>	<b>SUNDRY</b> Any other item not specifically outlined above but needed for the purpose of work execution shall be deemed to be included in the priced items		
	<b>Carried to Collection</b>		

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFITS SCHEME

ITEM	DESCRIPTION	KSHS	CTS
	<b><u>COLLECTION</u></b>		
	Brought Forward From Page GP/1		
	Brought Forward From Page GP/2		
	Brought Forward From Page GP/3		
	Brought Forward From Page GP/4		
	Brought Forward From Page GP/5		
	Brought Forward From Page GP/6		
	Brought Forward From Page GP/7		
	Brought Forward From Page GP/8		
	Brought Forward From Page GP/9		
	Brought Forward From Page GP/10		
	Brought Forward From Page GP/11		
	Brought Forward From Page GP/12		
	<b>TOTAL FOR GENERAL PRELIMINARIES CARRIED TO BILL No. 1 SUMMARY</b>		

# BILLS OF QUANTITIES

295A1 **KENGEN PERIMETER FENCE-OPTION 1**

Item	<b>Statutory Approval Costs</b>	Qty	Unit	Rate	Amount	
	<b>Section 1 Statutory Approvals</b>				Kshs	Cts
	<b>Architectural and Structural Drawings</b>					
A	Allow a sum to cover for Generation of Architectural and Structural drawings including all the necessary details for the boundary wall and as requested by the Employer		item			
	<b>Statutory Approvals</b>					
B	Allow a sum to cover for any Statutory Approval; submission to Kiambu County, NEMA, NCA etc in compliance with statutory requirements		item			
	<b>To Summary Kshs</b>					

Item	Statutory Approval Costs	Qty	Unit	Rate	Amount
	SUMMARY				Kshs Cts
	Section 1 Statutory Approvals			Page 1	
	To Summary Kshs				



295A1 **KENGEN PERIMETER FENCE-OPTION 1**

Item	Masonry Perimeter Fence as Option 1	Qty	Unit	Rate	Amount	
	<b>Section 1 Perimeter Fence</b>				Kshs	Cts
	<b>Site Clearance (All Provisional)</b>					
A	Clear the entire site of shrubs and bushes as directed	93000	m2			
B	Cut down trees, cut them into logs of approximately 1500mm, grub up roots, fill with selected soil and dispose debris as directed girth above 600mm but not exceeding 900mm.	12	nr			
	<b>Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials</b>					
	For foundations commencing at ground level					
C	not exceeding 1.50 metres deep	980	m3			
	For column bases commencing at ground level					
D	not exceeding 1.50 metres deep	965	m3			
	<b>Disposal</b>					
E	Backfilling to make up levels	390	m3			
F	Backfilling around foundations	878	m3			
	<b>Plain concrete mix 1:4:8 class 10</b>					
G	Blinding under foundations and bases, thickness 50 mm	1615	m2			
	<b>Vibrated reinforced concrete Class 20/20</b>					
H	Foundations	137	m3			
I	Column bases	193	m3			
J	Ground beams	25	m3			
K	Substructure Columns	32	m3			
L	Superstructure Columns	51	m3			
	<b>To Collection Kshs</b>					

295A1 **KENGEN PERIMETER FENCE-OPTION 1**

Item	Masonry Perimeter Fence as Option 1	Qty	Unit	Rate	Amount	
	<b>Section 1 Perimeter Fence</b>					
	<b>Vibrated reinforced concrete class 25</b>				Kshs	Cts
A	Retaining walls, thickness 200 mm	401	m2			
B	Tier beam at the stream crossing points (4no.) to create water passage at Beacon T11, T9 & T8; beam size 200 x 600 x 4200mm length	2	m3			
C	Foundation columns at the stream crossing points	9	m3			
	<b>Vibrated reinforced concrete Class 25/20</b>					
D	Foundations	80	m3			
	<b>Construction joints</b>					
E	15mm thick isolation joint with 15mm diameter bond breaking cord and approved polyutherane sealant applied according to manufacturer's instructions	370	m			
	<b>Deformed high yield ribbed bars reinforcement to BS 4449; cut, bend, hoist and fix as directed : including all necessary tying wires, spacer blocks, templates and spacer stools</b>					
F	8 Diameter bars	19310	kg			
G	10 Diameter bars	2080	kg			
H	12 Diameter bars	37126	kg			
I	16 Diameter bars	983	kg			
	<b>Formwork</b>					
J	Sides of foundations, bases, etc.	909	m2			
K	Sides of superstructure columns	515	m2			
L	Sides of substructure columns	257	m2			
M	Sides of ground beams	248	m2			
	<b>Smooth marine board formwork including mould oil applied on the surfaces where necessary</b>					
N	Sides of columns	24	m2			
O	Soffits and sides of beams	24	m2			
	<b>To Collection Kshs</b>					

295A1 **KENGEN PERIMETER FENCE-OPTION 1**

Item	Masonry Perimeter Fence as Option 1	Qty	Unit	Rate	Amount	
	<b>Section 1 Perimeter Fence</b>					
	<b>Smooth marine board formwork including mould oil applied on the surfaces where necessary</b>				Kshs	Cts
A	Sides of retaining wall	799	m2			
	<b>Precast concrete trimmings finished fair on all exposed faces</b>					
B	Copings with 2 labours, size 300 x 75 mm	1750	m			
C	Pier caps, size 400 x 300 x 50 mm	536	nr			
	<b>Weep holes</b>					
D	60 mm diameter Weep holes in 50 mm diameter UPVC pipe average length 300 mm encased in concrete wall at intervals of 3no. per bay as per the structural engineer's drawings and details	1686	nr			
	<b>Machine cut natural stone walling, bedded and jointed in cement sand mortar (1:3), reinforced with 20 gauge x 25mm wide hoop iron reinforcement and column wall ties in every alternate course</b>					
E	200mm thick superstructure walling	3843	m2			
	<b>Approved natural quarry stone walling; bedded, jointed and pointed in cement sand mortar 1:3 laid in regular courses; reinforced with 20 gauge x 25mm wide hoop iron reinforcement in each alternate course</b>					
F	200 mm thick walling to foundation	2180	m2			
	<b>200mm thick walling in cement sand render mix 1:3</b>					
G	Extra fair face and raked horizontal joints and flush pointing to horizontal joints, 10mm diameter	3843	m2			
	<b>Bituminous felt damp proof courses laid in and including levelling screed of cement mortar</b>					
H	In walling, width 200 mm	1750	m			
	<b>To Collection Kshs</b>					

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Item	Masonry Perimeter Fence as Option 1	Qty	Unit	Rate	Amount	
	SUMMARY				Kshs	Cts
	Section 1 Perimeter Fence			Page 6		
	To Summary Kshs					

Item		Qty	Unit	Rate	Amount	
	SUMMARY				Kshs	Cts
	Statutory Approval Costs			Page 2		
	Masonry Perimeter Fence as Option 1			Page 7		
	Total Kshs					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
	<b>Site Clearance (All Provisional)</b>					
A	Clear designated areas of site of shrubs, bush and small trees, grub up roots, fill with selected soil and burn debris	12	m2			
B	Excavate to remove topsoil and load, wheel and deposit where directed, average depth commencing from ground level 150 mm	12	m2			
	<b>Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials</b>					
	For foundations commencing at reduced level					
C	not exceeding 1.50 metres deep	12	m3			
	For column bases commencing at reduced level					
D	not exceeding 1.50 metres deep	7	m3			
E	Extra over for excavating in (class I) rock	1	m3			
	<b>Disposal</b>					
F	Backfilling to make up levels	9	m3			
G	Backfilling around foundations	10	m3			
	<b>Imported filling</b>					
H	Hardcore bed, thickness 300 mm	10	m2			
I	Murram blinding to hardcore, etc., thickness 50 mm	10	m2			
	<b>Damp-proof membranes</b>					
J	1000 Gauge polythene laid under surface beds	10	m2			
	<b>To Collection Kshs</b>					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
	<b>Anti-termite treatment</b>					
A	Premise 200 SC Chemical or equal and approved chemical anti-termite treatment executed by an approved specialits under a ten-year guarantee to surfaces of hardcore, etc.(Allow for treating vertical sides of foundation trenches, column base pits and around building plinth as per manufacturers printed instructions, quantity measured flat)	10	m2			
	<b>Plain concrete mix 1:4:8</b>					
B	Blinding under strip foundations, thickness 50 mm	10	m2			
	<b>Vibrated reinforced concrete Class 25/20</b>					
C	Strip foundation	3	m3			
D	Beds, thickness 100 mm	10	m2			
E	Columns	1	m3			
	<b>Deformed high yield ribbed bars reinforcement to BS 4449; cut, bend, hoist and fix as directed : including all necessary tying wires, spacer blocks, templates and spacer stools</b>					
F	8 Diameter bars	233	kg			
G	10 Diameter bars	135	kg			
H	12 Diameter bars	83	kg			
	<b>Steel mesh fabric reinforcement to B.S. 4483</b>					
I	Layer of mesh fabric reinforcement laid in blinding (measured nett - no allowance made for laps) ref. no. A98	10	m2			
	<b>Formwork</b>					
J	Edges of beds, etc. sawn timber 75- 150 mm high	12	m			
	<b>To Collection Kshs</b>					



## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
	<b>Sawn timber formwork</b>					
A	To Sides of column bases	6	m2			
B	To Sides of strip footing	8	m2			
	<b>Smooth marine board formwork including mould oil applied on the surfaces where necessary</b>					
C	Sides of columns	5	m2			
	<b>Approved natural quarry stone walling; bedded, jointed and pointed in cement sand mortar 1:3 laid in regular courses; reinforced with 20 gauge x 25mm wide hoop iron reinforcement in each alternate course</b>					
D	200 mm thick walling to foundation	20	m2			
	<b>Bituminous felt damp proof courses laid in and including levelling screed of cement mortar</b>					
E	In walling, width 200 mm mm	17	m			
	<b>Cement and sand 1:3 render</b>					
F	Finish to plinths steel trowelled smooth, 20mm thick	12	m2			
	<b>Prepare and apply two coats bituminous paint</b>					
G	Rendered plinths	12	m2			
	<b>To Collection Kshs</b>					

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## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 2 Reinforced Concrete Superstructure</b>				Kshs	Cts
	<b>Vibrated reinforced concrete Class 25/20</b>					
A	Suspended slabs, thickness 150 mm	8	m2			
B	Beams	1	m3			
C	Columns	1	m3			
	<b>Deformed high yield ribbed bars reinforcement to BS 4449; cut, bend, hoist and fix as directed : including all necessary tying wires, spacer blocks, templates and spacer stools</b>					
D	8 Diameter bars	111	kg			
E	12 Diameter bars	280	kg			
	<b>Smooth marine board formwork including mould oil applied on the surfaces where necessary</b>					
F	Sides of columns	11	m2			
G	Soffits and sides of beams	19	m2			
H	Soffits of suspended slab	8	m2			
I	Edges of suspended slab girth 75-150mm	12	m			
	<b>To Summary Kshs</b>					



## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 4 Doors</b>				Kshs	Cts
	<b>Flush doors to B.S. 459 (Part 2)</b>					
A	45 mm Solid core flush doors faced both sides with 6 mm mahogany veneer and hardwood lipped all round, door to details and approval, overall size 900 x 2400 mm	2	nr			
	<b>Doors, frames and finishings in wrought mahogany</b>					
B	25mm Quadrant Bead	11	m			
C	Glazing beads with two labours fixed with cups and screws 25 x 25 mm	2	m			
D	Architraves with one labour size, 40 x 25 mm	11	m			
	<b>Wrought Mahogany</b>					
E	Frames with 2 labours plugged 200 x 50 mm	11	m			
	<b>Ironmongery - supply and fix with matching screws</b>					
F	Pairs heavy duty steel butt hinges 100 mm	3	nr			
G	Two lever lock with Silver Aluminium handle as Union or equal and approved	1	nr			
H	Oval brass - floor mounted	1	nr			
	<b>Clear sheet glass</b>					
I	4 mm Glass and glazing to wood with beads (measured separately) in panes 0.1-1m2	1	m2			
	<b>Knot, prime, stop and apply two undercoats and one matt finishing coat 'crown' varnish to woodwork</b>					
J	Timber surfaces, 200-300 mm girth	11	m			
	<b>To Collection Kshs</b>					



## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	Section 5 Windows				Kshs	Cts
	<p><b>Powdercoated aluminium framed windows including mullions and transomes size 75 x 50mm complete with equal top hung sash, equal fixed panels ,complete with 6.38 mm thick laminated glass and glazing with aluminium beads, rubber beading ,all ironmongery and fixing to masonry jambs and pointing all round with silicon all to architect's details and approval</b></p>					
A	Window type A1 at security desk overall size 1200 x 1200mm high	1	nr			
B	Window type B at the WC overall size 600 x 900mm high	1	nr			
	To Summary Kshs					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 6 Roof and Rain Water Disposal</b>				Kshs	Cts
	<b>Precast concrete trimmings finished fair on all exposed faces</b>					
A	Copings with 2 labours, size 300 x 50 mm	12	m			
	<b>Cast Iron Fulbora</b>					
B	150mm diameter fulbora with 200 x 200 mm heavy duty mild steel gratings cover for roof slab drainage through Upvc Pipes (m.s) to Architects/engineer's Approval	2	nr			
	<b>Machine cut natural stone walling, bedded and jointed in cement sand mortar (1:3), reinforced with 20 gauge x 25mm wide hoop iron reinforcement and column wall ties in every alternate course</b>					
C	200mm thick parapet walls above Gate House	14	m2			
	<b>Bituminous felt damp proof courses laid in and including levelling screed of cement mortar</b>					
D	In walling beneath coping, width 200 mm mm	12	m			
	<b>Waterproofing to suspended roof slab</b>					
E	Clean surface, supply and install by blowtorching, two layers of 4mm thick modified Imper-italia APP membrane rubber water proofing finish as supplied by Engineering supplies 2001 Limited or other equal and approved suppliers on cement sand screed (m.s) to engineer's approval	8	m2			
F	150 mm high skirting in two layers of 4mm thick modified Imper-italia APP membrane rubber water proofing as before described on rendered walls (m.s)	12	m			
	<b>To Collection Kshs</b>					







Item	Gate House	Qty	Unit	Rate	Amount	
	<b>Section 8 Internal Finishes</b>				Kshs	Cts
	<b>Cement sand plaster mix 1:3</b>					
A	To Soffits of suspended slab to receive paint (m.s), thickness 25 mm	8	m2			
	<b>Cement sand plaster mix 1:4</b>					
B	To masonry or concrete surfaces to receive ceramic wall tiles (m.s), thickness 25 mm	11	m2			
C	To masonry or concrete surfaces to receive paint (m.s), thickness 25 mm	78	m2			
	<b>Ceramic wall tiles</b>					
D	Supply and fix 600 x 450 x 8mm thick approved ceramic wall tiles on plastered wall (m.s) including bedding in approved adhesive and pointing with matching coloured chemical and moisture resistant grout; including 2mm tile spacers where necessary to approved pattern	11	m2			
	<b>Non slip Ceramic floor tiles</b>					
E	Supply and fix 600 x 300 x 10 mm thick Ceramic non-slip floor tiles fixed on cement sand screed (m.s) with approved adhesive and pointed with matching coloured chemical and moisture resistant grout; including 3 mm tile spaces where required all match the approved pattern	8	m2			
F	100 mm high tile skirting	23	m			
	<b>Corner edge strip to tiles</b>					
G	Aluminium tile corner strips L profile - Matt Finish, sizes 12 mm	7	m			
	<b>Cement and Sand (1:4) beds and backings</b>					
H	Beds to receive Non slip ceramic tiles (m.s) flooring, finished with a wood float, thickness 30 mm	8	m2			
	<b>To Collection Kshs</b>					



## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
					Kshs	Cts
	<b>Section 9 Main Entrance Gate</b>					
	<b>Steel doors</b>					
A	Fabricate and install standard mild steel Single leaf sliding gate at the Main Entrance overall size 5100 x 2400mm high fabricated in 50 x 50 x 3mm mild steel hollow sections and 3 mm thick mild steel plate all smooth welded and primed including fixing to masonry/concrete jambs and head, complete with all fixing accessories; rollers, angle line and iron mongeries all to Architects later Schedule	1	nr			
B	Fabricate and install standard mild steel pedestrian gate overall size 900 x 2400mm high fabricated in 50 x 50 x 3mm mild steel hollow sections and 3 mm thick mild steel plate all smooth welded and primed including fixing to masonry/concrete jambs and head, complete with all fixing accessories and iron mongeries all to Architects later Schedule	1	nr			
	<b>To Summary Kshs</b>					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Gate House	Qty	Unit	Rate	Amount	
	<b>SUMMARY</b>				Kshs	Cts
	Section 1 Substructure Works (All Provisional)			Page 4		
	Section 2 Reinforced Concrete Superstructure			Page 5		
	Section 3 Walling			Page 6		
	Section 4 Doors			Page 8		
	Section 5 Windows			Page 9		
	Section 6 Roof and Rain Water Disposal			Page 11		
	Section 7 External Finishes			Page 12		
	Section 8 Internal Finishes			Page 14		
	Section 9 Main Entrance Gate			Page 15		
	<b>To Summary Kshs</b>					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
	<b>Site Clearance (All Provisional)</b>					
A	Clear designated areas of site of shrubs, bush and small trees, grub up roots, fill with selected soil and burn debris	2	m2			
	<b>Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials</b>					
	For pits commencing at ground level					
B	not exceeding 1.50 metres deep	5	m3			
	For pits commencing at reduced level					
C	1.50 to 3.00 metres deep	3	m3			
D	3.00 to 4.50 metres deep	3	m3			
E	Extra over for excavating in (class I) rock	5	m3			
	<b>Disposal</b>					
F	Backfilling to make up levels	4	m3			
G	Backfilling around foundations	4	m3			
	<b>Damp-proof membranes</b>					
H	1000 Gauge polythene laid under surface beds	2	m2			
	<b>Anti-termite treatment</b>					
I	Premise 200 SC Chemical or equal and approved chemical anti-termite treatment executed by an approved specialits under a ten-year guarantee to surfaces of hardcore, etc.(Allow for treating vertical sides of foundation trenches, column base pits and around building plinth as per manufacturers printed instructions, quantity measured flat)	2	m2			
	<b>To Collection Kshs</b>					

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	<b>Section 1 Substructure Works (All Provisional)</b>				Kshs	Cts
	<b>Plain concrete mix 1:4:8</b>					
A	Blinding under strip foundations, thickness 50 mm	3	m2			
	<b>Vibrated reinforced concrete Class 20/20</b>					
B	Strip foundation	1	m3			
C	Beds, thickness 150 mm	2	m2			
	<b>Deformed high yield ribbed bars reinforcement to BS 4449; cut, bend, hoist and fix as directed : including all necessary tying wires, spacer blocks, templates and spacer stools</b>					
D	8 Diameter bars	44	kg			
E	10 Diameter bars	58	kg			
	<b>Steel mesh fabric reinforcement to B.S. 4483</b>					
F	Layer of mesh fabric reinforcement laid in blinding (measured nett - no allowance made for laps) ref. no. A142	2	m2			
	<b>Formwork</b>					
G	Edges of beds, etc. sawn timber 75- 150 mm high	5	m			
	<b>Sawn timber formwork</b>					
H	To Sides of strip footing	3	m2			
	<b>Smooth marine board formwork including mould oil applied on the surfaces where necessary</b>					
I	Soffits of suspended slab	2	m2			
	<b>To Collection Kshs</b>					



[illegible]



## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	Section 3 Walling				Kshs	Cts
	Machine cut natural stone walling, bedded and jointed in cement sand mortar (1:3), reinforced with 20 gauge x 25mm wide hoop iron reinforcement and column wall ties in every alternate course					
A	200mm thick external walls	11	m2			
To Summary Kshs						

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	<b>Section 4 Doors</b>				Kshs	Cts
	<b>Flush doors to B.S. 459 (Part 2)</b>					
A	45 mm Semi solid core flush doors faced both sides with 6 mm interior quality plywood for painting and hardwood lipped all round, size 900 x 2400 mm	1	nr			
	<b>Doors, frames and finishings in wrought Cypress</b>					
B	25mm Quadrant Bead	6	m			
C	Architraves with one labour size, 40 x 25 mm	6	m			
	<b>Wrought Cypress</b>					
D	Frames with 2 labours plugged 150 x 50 mm	6	m			
	<b>Ironmongery - supply and fix with matching screws</b>					
E	Pairs heavy duty steel butt hinges 100 mm	2	nr			
F	Oval brass - floor mounted	1	nr			
	<b>Knot, prime, stop and apply two undercoats and one matt finishing coat 'crown' varnish to woodwork</b>					
G	Timber surfaces, 200-300 mm girth	6	m			
H	Timber general surfaces	4	m2			
	<b>To Summary Kshs</b>					

295B1 KENGEN GATEHOUSE & PIT LATRINE						
Item	Pit Latrine		Qty	Unit	Rate	Amount
	Section 5 Windows					Kshs
A	<p><b>Purpose made steel casement windows manufactured from standard 32mm Z sections to B.S.990, complete with handles,hinges,catches and building in lugs and 25x3mm SQS main frames incorporating permanent ventilating units with mosquito gauze, fixed to masonry jambs and concrete heads and cill, with mastic pointing all round</b></p> <p>Rectangular Window complete with composite horizontal and vertical 25x3mm mild steel burglarproof flat bars along the pane divisions to Architects later detail overall size 600 x 900 mm window type W01</p>		1	nr		
<b>To Summary</b>						<b>Kshs</b>

## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	<b>Section 6 Roof and Rain Water Disposal</b>				Kshs	Cts
	<b>Roof Covering to approved specialist</b>					
A	Prepainted to an approved colour IT5 Box profile roofing sheets gauge 28, supplied and fixed on mild steel/timber purlins (m.s) with and including self fixing screws; laid with 140mm side laps and a minimum 200mm end laps all to approval	2	m2			
	<b>Structural timber: The following in prime grade, pressure impregnated Sawn Cypress timber with bolted connections including all associated connections, timber packing, ms plates etc to structural engineer's details</b>					
	The following in - No.Type T1 trusses					
B	Main rafters size 100 x 50mm	6	m			
C	Main tie as bottom member size 100 x 50mm	4	m			
D	Struts and ties sizes 75 x 50mm	3	m			
E	Purlin sizes, 75 x 50 mm	7	m			
	<b>To Summary Kshs</b>					

295B1	KENGEN GATEHOUSE & PIT LATRINE
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Item		Qnty	Unit	Rate	Amount Kshs	Cts
	Pit Latrine					
	Section 7 External Finishes					
A	<p>200mm thick walling in cement sand render mix 1:3</p> <p>Extra fair face and raked horizontal joints and flush pointing to horizontal joints, 10mm diameter</p>	13	m2			
B	<p>Cement and sand 1:4 rendering</p> <p>To exterior sides of the masonry and concrete finished with a wood trowel to receive final finish, thickness 15 mm</p>	2	m2			
C	<p>Prepare and apply three coats Crown "Permaplast" paint</p> <p>Rendered walls externally</p>	2	m2			
	To Summary Kshs					

[illegible]



## 295B1 KENGEN GATEHOUSE &amp; PIT LATRINE

Item	Pit Latrine	Qty	Unit	Rate	Amount	
	<b>SUMMARY</b>				Kshs	Cts
	Section 1 Substructure Works (All Provisional)			Page 19		
	Section 2 Reinforced Concrete Superstructure			Page 20		
	Section 3 Walling			Page 21		
	Section 4 Doors			Page 22		
	Section 5 Windows			Page 23		
	Section 6 Roof and Rain Water Disposal			Page 24		
	Section 7 External Finishes			Page 25		
	Section 8 Internal Finishes			Page 26		
	<b>To Summary Kshs</b>					

Item		Qty	Unit	Rate	Amount	
	SUMMARY				Kshs	Cts
	Gate House			Page 16		
	Pit Latrine			Page 27		
	Total Kshs					

## SUMMARY PAGE

PROPOSED PERIMETER WALL FOR KENGEN STAFF RETIREMENT BENEFIT SCHEME AT REDHILL				
SUMMARY				
PERIMETER WALL				
	Item			Total Amount
				Kshs.
1	<b>PRELIMINARIES</b>			
a.	Particular Preliminaries			
b.	General Preliminaries			
2	<b>CONTIGENCIES-</b> (Amount to be spent under Employer's instruction and Approval)			5,000,000.00
3	<b>PERIMETER FENCE</b>			
4	<b>GATE HOUSE AND GATES</b>			
5	<b>PIT LATRINE</b>			
6	<b>STATUTORY APPROVAL COSTS</b>			
	<b>TOTAL KSHS. INCLUSIVE OF VAT</b>			

Amount in Word:

Completion period in Weeks .....

Signed :.....

( Employer)

Signed :.....

(Contractor)

Address: .....

Address: .....

Date : .....

Date : .....

# LEGEND

- Plot boundary
- Earthen road
- Tarmac
- Encroachment

BOUNDARY SURVEY FOR LR NO.18997/50  
REDHILL.

Client:

Survey by:

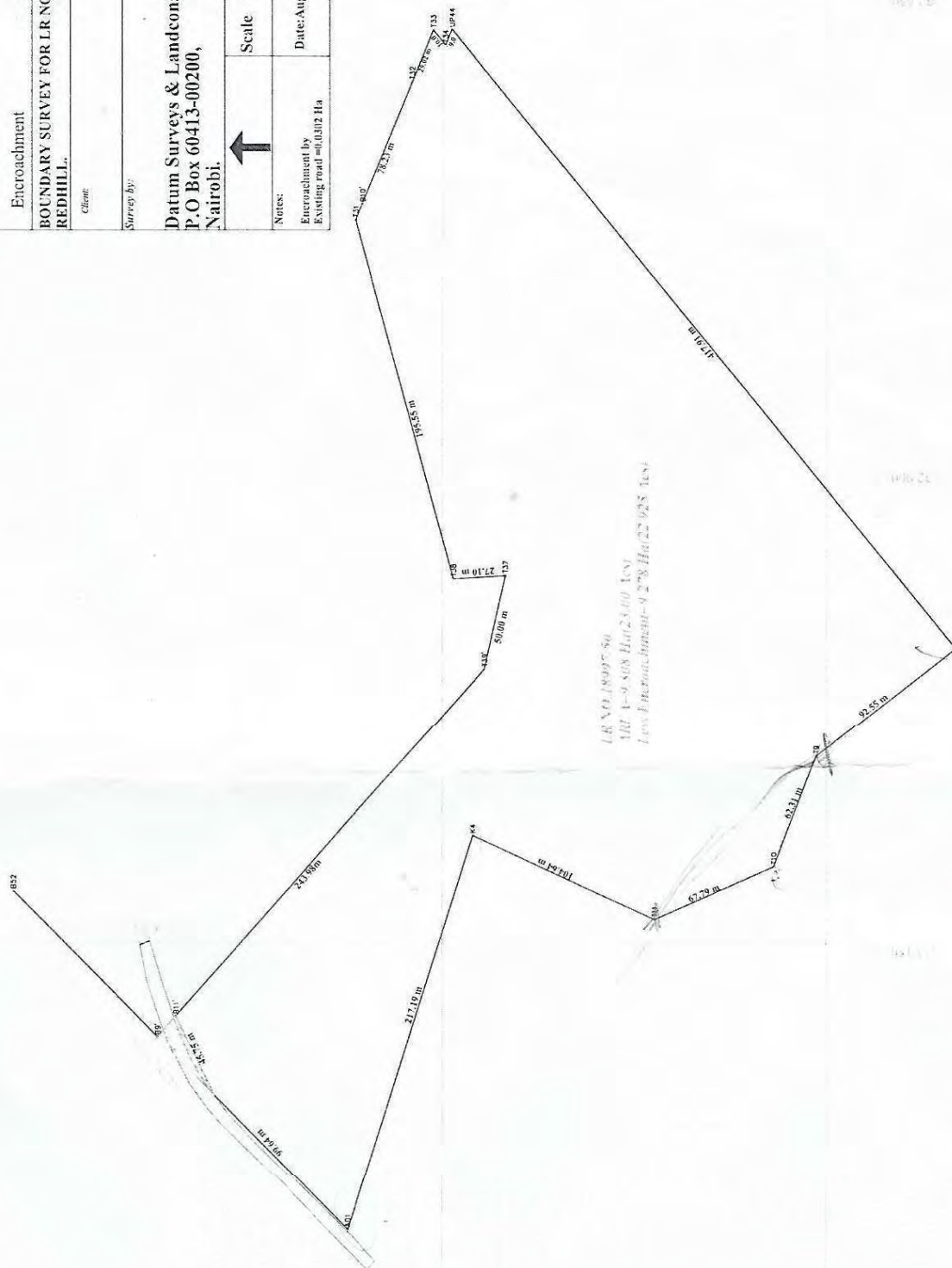
Datum Surveys & Landconsultants,  
P.O Box 60413-00200,  
Nairobi.

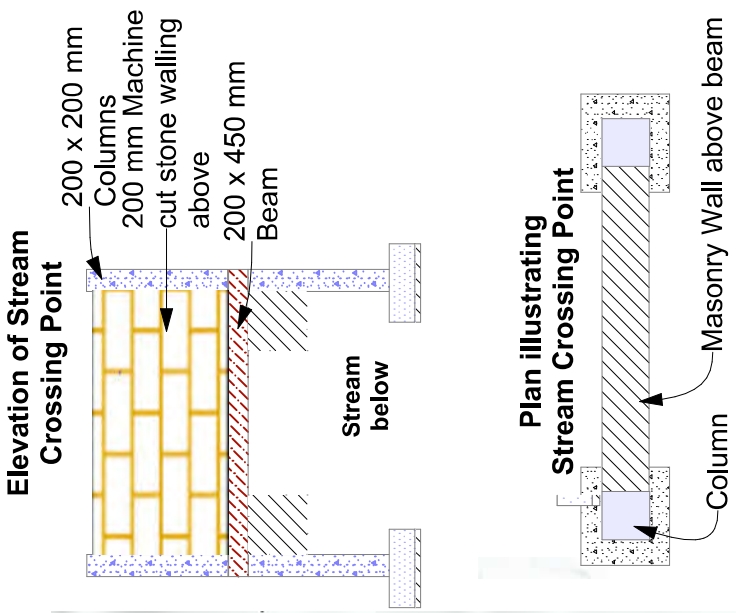
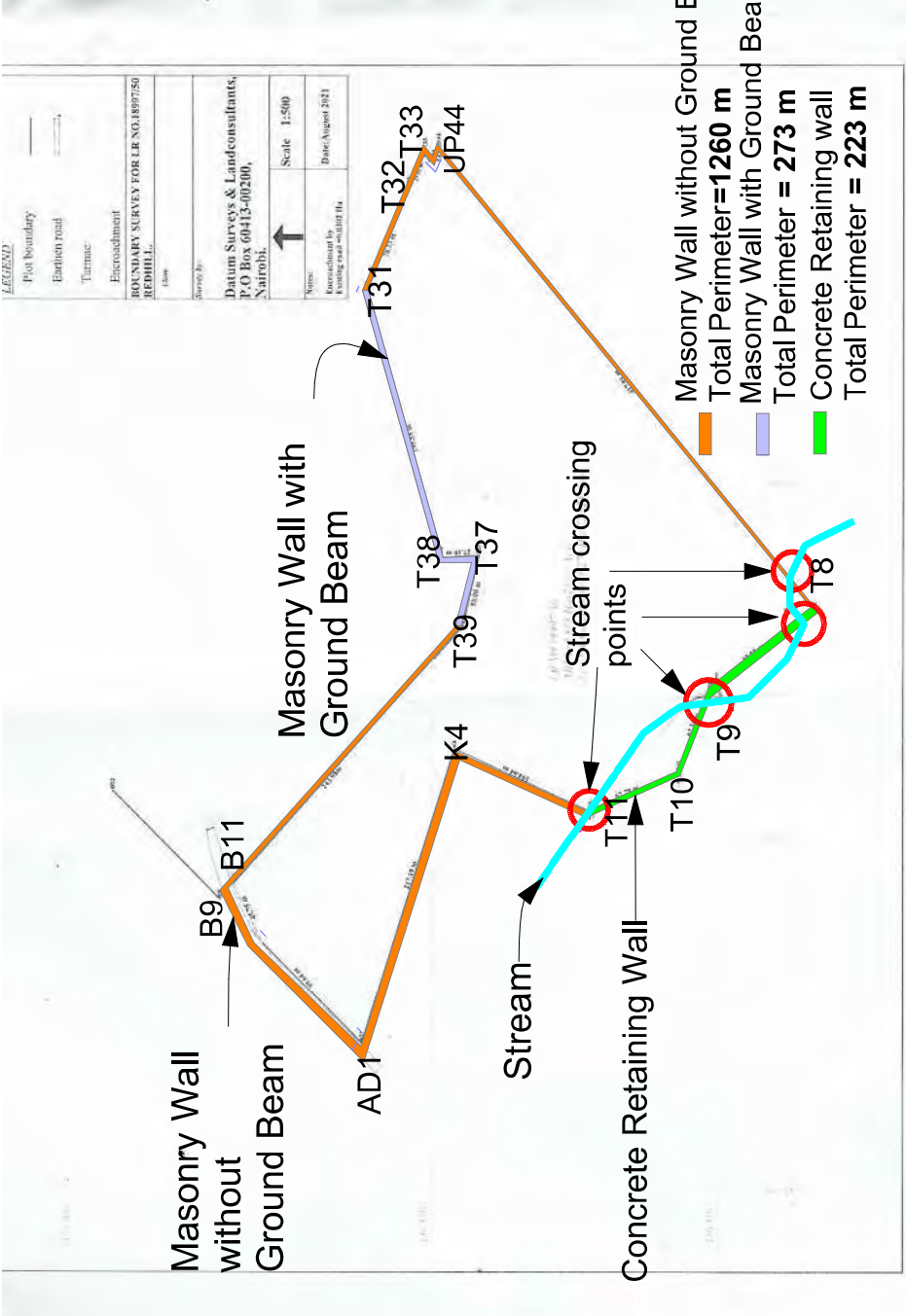



Scale 1:500

Date: August 2021

Notes:  
Encroachment by  
Existing road = 0.002 Ha

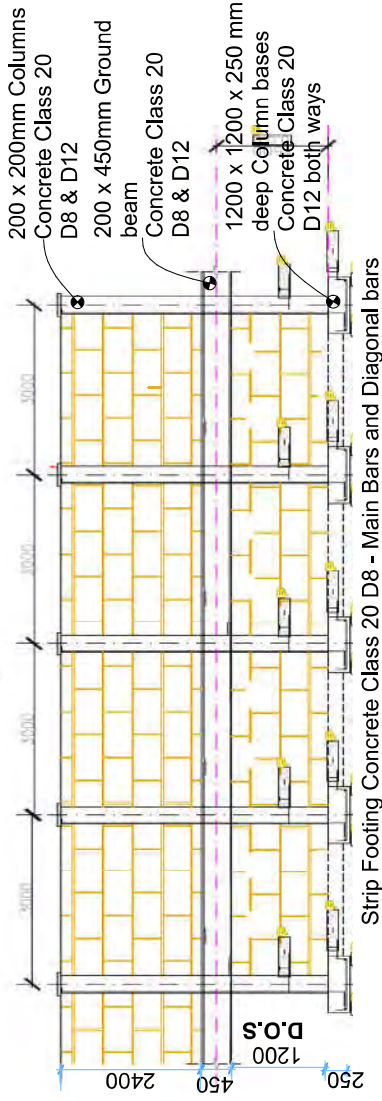




DRAWING BY:  Agilis Development Solutions Limited SEPTEMBER 2022	DRAWING TITLE <b>KENGEN DEFINED CONTRIBUTION SCHEME</b>	DRAWING TITLE <b>PERIMETER WALL LAYOUT</b>
PROJECT TITLE <b>PROPOSED PERIMETER WALL ON REDHILL LAND, OFF LIMURU ROAD; LIMURU SUBCOUNTY; KIAMBU COUNTY</b>	SCALE <b>Drawing Not to Scale</b>	

### MASONRY WALL WITH GROUND BEAM

Perimeter = 272.65 m Between Beacons: T39 to T31

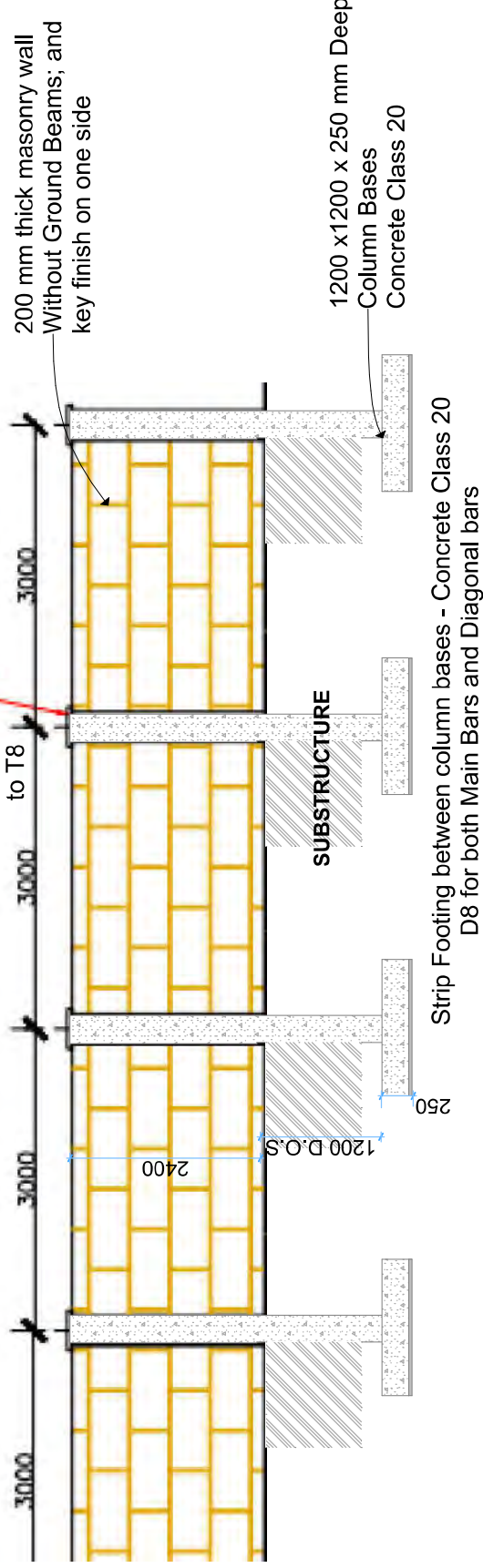


Strip Footing Concrete Class 20 D8 - Main Bars and Diagonal bars

### MASONRY WALL WITHOUT GROUND BEAM

Perimeter = 1260 m

Following Beacons: T11 to T39, and T31



Strip Footing between column bases - Concrete Class 20 D8 for both Main Bars and Diagonal bars

### REINFORCED CONCRETE RETAINING WALL

Perimeter = 223 m

Between Beacons: T11 to T8

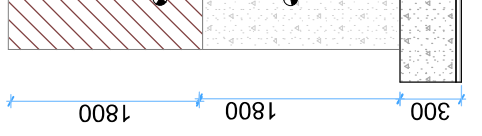
Along the river stream/ riperean land area

200 mm thick Machine cut solid masonry wall above retaining wall

200 mm thick Retaining wall Class 25

1200 x 300 mm deep Retaining wall footing Concrete Class 25

50 mm thick Blinding



DRAWING BY:



SEPTEMBER 2022

PROCURING ENTITY

**KENGEN DEFINED CONTRIBUTION SCHEME**

PROJECT TITLE

**PROPOSED PERIMETER WALL ON REDHILL LAND, OFF LIMURU ROAD; LIMURU SUBCOUNTY; KIAMBU COUNTY**

DRAWING TITLE

**PERIMETER WALL LAYOUT**

SCALE

**Drawing Not to Scale**