THE REPUBLIC OF GHANA

The Ministry Of Transport
The Ministry of Food and Agriculture

GHANA PORTS AND HARBOURS AUTHORITY

CONTRACT

Contract No: GPHA/FLS-CDB-2012/001.2

Construction of Eleven Coastal Fishing Ports and Fish Landing Sites, Ghana.

Employer
GHANA PORTS AND HARBOURS AUTHORITY

Contractor
CHINA HARBOUR ENGINEERING COMPANY LIMITED

Tema, Ghana

23rd July, 2012

Contract Agreement

THIS AGREEMENT made the 23rd day of JULY, 2012, between **THE GHANA PORTS AND HARBOURS AUTHORITY,** a corporate body constituted under the Ghana Ports and Harbours Authority Act 1986 (PNDC Law 160) incorporated under the laws of Ghana, having its principal offices at the GPHA Towers, P. O. Box 150, Tema, Greater Accra, Ghana (hereinafter "the Employer"), of the one part, and **CHINA HARBOUR ENGINEERING COMPANY LIMITED (CHEC),** a corporation incorporated under the laws of China and having its principal place of business at No. 9 Chunxiu Road, Dongzhimenwai, Beijing 100027, China, (hereinafter "the Contractor"), of the other part:

WHEREAS the Employer desires that the Works known as ***Construction of Eleven(11) Coastal Fishing Ports and Fish Landing Sites in Ghana*** should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. This Agreement shall prevail over all other Contract documents. The following documents shall be deemed to form and be read and construed as part of this Agreement:

   (i) the Letter of Acceptance;

   (ii) the Bid;

   (iii) the Particular Conditions;

   (iv) the General Conditions (FIDIC);

   (v) the Specifications (General and Particular specifications);

   (vi) the Drawings;

   (vii) the completed Schedules and corrected Bills of Quantities; and

   (viii) any Addenda, Notes, Minutes of Meetings, Negotiations and other Correspondences.

3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of The Republic of Ghana on the day, month and year indicated above.

For the **Contractor**	For the **Employer**
YANG TAO	**RICHARD A. Y. ANAMOO**
AUTHORIZED REPRESENTATIVE	DIRECTOR GENERAL
CHEC, GHANA	GPHA
witness	witness
name: Zhang Tian	name: Sandra Opoku
designation:	designation: Ag. Board Secretary
date: 23/07/2012	date: 23-07-12

Particular Conditions (PC)

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

Part A – Particular Conditions of Contract

Conditions	Sub-Clause	Data
Definitions	1.1.1.8 1.1.1.9	Tender: Tender and Bid shall have the same meaning and may be used interchangeably.
Employer's name and address	1.1.2.2 & 1.3	**The Director General** Ghana Ports and Harbours Authority P. O. Box 150, Tema, Ghana. 9th Floor; GPHA Towers; Headquarters Building, Tema Harbour District, Tema, Ghana
Employer's Personnel	1.1.2.6, 2.3	Other than the Engineer, Employer's personnel for the coordination of the works are: **Ing. Huseini Suleiman** Project Manager, Port of Takoradi **Komla W. Ofori** Principal Engineer, GPHA-Headquarters. In the event that any other Representative is appointed to act on behalf of the Employer, the Contractor would be duly informed with the authorities of the appointed representative.
Time for Completion	1.1.3.3	**30**-Months from the Commencement Date.
Defects Notification Period	1.1.3.7	**365 days.** **(Excluding certified dredging works)**
Electronic transmission systems	1.3	Correspondence only by sequential serial numbered e-mails, confirmed by signed printed original documents as stipulated in Sub-Clause 1.3(a) of the Conditions of Contract. **For the Employer** dg@ghanaports.net

Conditions	Sub-Clause	Data
		ranamoo@ghanaports.net cc: hsuleiman@ghanaports.net cc: projects_hq@ghanaports.net **For Contractor:** tyang@chec.bj.cn cc: tzhang@chec.bj.cn **For Employer's Engineer / Consultant** ben.reeskamp@rhdhv.com cc: charlespappoe@yahoo.com
Accepted Contract Amount	1.1.4.1.	**One Hundred and Ninety-Five Million, Five hundred and Seven Thousand, Five Hundred and Sixty-Four** United States Dollars; **(US$ 195,507,564.00)** and in accordance with the Accepted Sub-sums for the various sites enlisted in the BoQ and Addenda.
Governing Law	1.4	The Republic of Ghana
Ruling language	1.4	English
Language for communications	1.4	English (at all levels of communications covered under this Contract)
Contract Agreement	1.6	This Contract becomes effective only after the signing of the applicable GoG-CDB Subsidiary Loan Agreement.
Compliance with Laws	1.13(b)	**Amend this Sub-Clause to read:** "The contractor shall not pay taxes, import duties and levies as implied in the Master Facility Agreement between the Government of Ghana and the China Development of Bank."
Time for access to the Site	2.1	Within 21 days after Contract Signing Date.
Employer's Financial Arrangements	2.4	***Amend Clause to Read*** "Employer is supported by the MOT-MOFA Sub-component of Government of Ghana – China Development Bank (CDB) Facility. Payments certified by the Employer shall be made directly by the Ministry of Finance and Economic Planning (MoFEP)".
The Engineer	3.0, 3.1	Also referred to as **"The Employer's Engineer"** is

Conditions	Sub-Clause	Data
		DHV BV, Netherlands Laan 1914 No. 35, Amersfoort, The Netherlands.
The Contractor	4	**CHINA HARBOUR ENGINEERING COMPANY LIMITED.** No. 9 Chunxiu Road, Dongzhimenwai, Beijing, 100027, P-R. China.
Performance Security	4.2	The Performance Security shall be in the form of either 10% of the Accepted Contract Amount for a Bank / Demand Guarantee **OR** 30% of the Accepted Contract Amount for Performance Bond in amount(s) and in the same currency of the Accepted Contract Amount. Valid original Performance Security to be submitted to the Employer within 21 days from the date of Signing of Subsidiary Loan Agreement.
Contractor's Authorized Representative	4.3	Contractor shall name his Authorized Representative within 28 days from the date of effectiveness of the Contract.
Engagement of Staff and Labour; **Plant and Materials Intended for the Works**	6.1 6.4 14.5	Add to these sub-clauses: ""**Local Content" Component:** Up to, or at least, forty-percent (40%), of all works, supplies and services indicated in the scope of this contract shall be administered as Local Content Component in consonance with the requirements of the Government of Ghana (GoG) – China Development Bank (CDB) Master Facility Agreement. All works, services and supplies identified and to be administered as 'Local Content' components shall be on the recommendation of the Contractor and subject to the approval of the Employer's Engineer / Employer. All nominated sub-contractors, suppliers, etc., for the execution of the local content components are expected to be, verified by the Employer's Engineer, competent Ghanaian entities with valid certificates of operations under the relevant laws of the Republic of Ghana."

Conditions	Sub-Clause	Data
Normal working hours	6.5	8 hours/day OR time such as agreed by parties in the interest of reasonable safety of workers, local socio-economic conditions, statutory holidays, festive seasons or days, environmental concerns of residents near the various sites, resources, and the prevailing supervision requirements. The Engineer shall issue relevant notices / concerns / instructions where necessary. The Contractor shall be entitled to carry out its works continuously, day and night, including on locally recognized holidays and days of rest, unless otherwise stated by the Employer on specific occasions.
Commencement Date	8.1	Subject to Sub-Clause 1.6 "Contract Agreement" of the Conditions of Contract, this Contract is effective at the signing of the applicable GoG-CDB Subsidiary Loan Agreement. Works Commencement Date is therefore within **56 Days** from the Date of the signing of the applicable GoG-CDB Subsidiary Loan Agreement.
Delay damages for the Works	8.7 & 14.15(b)	0.02 % of the Contract Price per week.
Maximum amount of delay damages	8.7	5 % of the final Contract Price.
Price Adjustment due to changes in legislation	13.7	The amounts payable to the Contractor, pursuant to Clause 13, shall be adjusted in respect of the rise or fall in the cost of Labour, Contractor's Equipment, Plant, Materials, and other inputs to the Works, by applying to such amounts the formulae prescribed in the Sub-Clause 13.8.

Conditions	Sub-Clause	Data
Adjustment for (other) changes in cost	13.8	To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other clauses in the Contract, the unit rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise or fall of costs over the contract period. All indices shall be the official indices published by the Ghana Statistical Service, Ministry of Finance and Economic Planning, Ghana. If the Contractor fails to complete the works within the period of completion prescribed in the Contract Data, or the extended period, the adjustment of prices shall be frozen and not applied, OR the current indices after the extension of time granted shall be applied, whichever is favorable to the Employer
The Contract Price	14.1	The Contract Price is **One Hundred and Ninety-Five Million, Five Hundred and Seven Thousand, Five Hundred and Sixty-Four United States Dollars; (US$ 195,507,564.00).** For which payments are subject to Clause 12 of the General Conditions of Contract – Measurements and Evaluations.
Total Advance Payment	14.2	**Thirty Percent (30%)** of the Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable. The Original of valid Bank / Demand Guarantee, of the same value as the sum of the Total Advance Payment, shall be lodged with the Employer (GPHA) and a Certified Copy of the Guarantee is to be lodged at the Ministry of Finance and Economic Planning (MoFEP).
Repayment amortization rate of Advance Payment	14.2(b)	Minimum, Twenty Percent **(20%)** per Interim Payment Certificate, where applicable.
Percentage of Retention	14.3	**5% on Interim Payment Certificates**

Conditions	Sub-Clause	Data
Limit of Retention Money	14.3	2.5% at the determination of the Penultimate Payment Certificate of Final Contract Amount.
Schedule of Payments	14.4	Payments to be raised i. According to the minimum volume of completed works for which interim payments are due; OR, ii. According to the maximum number of interim payment requests, disbursement admitted, per annum, under the governing Master Facility Agreement (GoG-CDB), whichever is applicable.
Minimum Amount of Interim Payment Certificates	14.6	3% of the Accepted Contract Amount for the total works over all the 11 sites **OR** 6% of the total value of all works in the case of a specific site, whichever is favorable to the Contractor.
Payment	14.7a	Replace "21 days" in sub-clause 14.7a with "28 days".
Delayed Payment	14.8	Replace "three percentage points" with "one and a half percentage points".
Periods for submission of insurance: - evidence of insurance by the submission of all the relevant Insurance Policies	18.1	Within 56 days from the Commencement Date.
Maximum amount of deductibles for insurance of the Employer's risks	18.2(d)	In accordance with the Preliminaries / Insurance provisions in the accepted Bid.
Minimum amount of third party insurance	18.3	**Two Hundred Thousand** US-Dollars **(US$200,000)**, per occurrence with unlimited number of occurrences.
Appointment of Dispute Board to be made by	20.3	**The President – Ghana Institution of Engineers.**

Conditions of Contract
for **CONSTRUCTION**

FOR BUILDING AND ENGINEERING WORKS
DESIGNED BY THE EMPLOYER

General Conditions

FEDERATION INTERNATIONALE DES INGENIEURS-CONSEILS
INTERNATIONAL FEDERATION OF CONSULTING ENGINEERS
INTERNATIONALE VEREINIGUNG BERATENDER INGENIEURE
FEDERACION INTERNACIONAL DE INGENIEROS CONSULTORES

General Conditions

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General Conditions

General Provisions

1.1
Definitions

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

1.1.1
The Contract

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

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

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

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

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

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

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

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

1.1.1.9 "**Appendix to Tender**" means the completed pages entitled appendix to tender which are appended to and form part of the Letter of Tender.

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

1.1.2
Parties and Persons

1.1.2.1 "Party" means the Employer or the Contractor, as the context requires.

1.1.2.2 "Employer" means the person named as employer in the Appendix to Tender and the legal successors in title to this person.

1.1.2.3 "Contractor" means the person(s) named as contractor in the Letter of Tender accepted by the Employer and the legal successors in title to this person(s).

1.1.2.4 "Engineer" means the person appointed by the Employer to act as the Engineer for the purposes of the Contract and named in the Appendix to Tender, or other person appointed from time to time by the Employer and notified to the Contractor under Sub-Clause 3.4 [*Replacement of the Engineer*].

1.1.2.5 "**Contractor's Representative**" means the person named by the Contractor in the Contract or appointed from time to time by the Contractor under Sub-Clause 4.3 [*Contractor's Representative*], who acts on behalf of the Contractor.

1.1.2.6 "**Employer's Personnel**" means the Engineer, the assistants referred to in Sub-Clause 3.2 [*Delegation by the Engineer*] and all other staff, labour and other employees of the Engineer and of the Employer; and any other personnel notified to the Contractor, by the Employer or the Engineer, as Employer's Personnel.

1.1.2.7 "**Contractor's Personnel**" means the Contractor's Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

1.1.2.8 "**Subcontractor**" means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.

1.1.2.9 "**DAB**" means the person or three persons so named in the Contract, or other person(s) appointed under Sub-Clause 20.2 [*Appointment of the Dispute Adjudication Board*] or Sub-Clause 20.3 [*Failure to Agree Dispute Adjudication Board*]

1.1.2.10 "**FIDIC**" means the Fédération Internationale des Ingénieurs-Conseils, the international federation of consulting engineers.

1.1.3
Dates, Tests, Periods and Completion

1.1.3.1 "**Base Date**" means the date 28 days prior to the latest date for submission of the Tender.

1.1.3.2 "**Commencement Date**" means the date notified under Sub-Clause 8.1 [*Commencement of Works*].

1.1.3.3 "**Time for Completion**" means the time for completing the Works or a Section (as the case may be) under Sub-Clause 8.2 [*Time for Completion*], as stated in the Appendix to Tender (with any extension under Sub-Clause 8.4 [*Extension of Time for Completion*]), calculated from the Commencement Date.

1.1.3.4 "**Tests on Completion**" means the tests which are specified in the Contract or agreed by both Parties or instructed as a Variation, and which are carried

out under Clause 9 [*Tests on Completion*] before the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.5 "**Taking-Over Certificate**" means a certificate issued under Clause 10 [*Employer's Taking Over*].

1.1.3.6 "**Tests after Completion**" means the tests (if any) which are specified in the Contract and which are carried out in accordance with the provisions of the Particular Conditions after the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.7 "**Defects Notification Period**" means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [*Completion of Outstanding Work and Remedying Defects*], as stated in the Appendix to Tender (with any extension under Sub-Clause 11.3 [*Extension of Defects Notification Period*]), calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [*Taking Over of the Works and Sections*].

1.1.3.8 "**Performance Certificate**" means the certificate issued under Sub-Clause 11.9 [*Performance Certificate*].

1.1.3.9 "**day**" means a calendar day and "**year**" means 365 days.

1.1.4
Money and Payments

1.1.4.1 "**Accepted Contract Amount**" means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

1.1.4.2 "**Contract Price**" means the price defined in Sub-Clause 14.1 [*The Contract Price*], and includes adjustments in accordance with the Contract.

1.1.4.3 "**Cost**" means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

1.1.4.4 "**Final Payment Certificate**" means the payment certificate issued under Sub-Clause 14.13 [*Issue of Final Payment Certificate*].

1.1.4.5 "**Final Statement**" means the statement defined in Sub-Clause 14.11 [*Application for Final Payment Certificate*].

1.1.4.6 "**Foreign Currency**" means a currency in which part (or all) of the Contract Price is payable, but not the Local Currency.

1.1.4.7 "**Interim Payment Certificate**" means a payment certificate issued under Clause 14 [*Contract Price and Payment*], other than the Final Payment Certificate.

1.1.4.8 "**Local Currency**" means the currency of the Country.

1.1.4.9 "**Payment Certificate**" means a payment certificate issued under Clause 14 [*Contract Price and Payment*].

1.1.4.10 "**Provisional Sum**" means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [*Provisional Sums*].

1.1.4.11 "**Retention Money**" means the accumulated retention moneys which the Employer retains under Sub-Clause 14.3 [*Application for Interim Payment Certificates*] and pays under Sub-Clause 14.9 [*Payment of Retention Money*].

1.1.4.12 "**Statement**" means a statement submitted by the Contractor as part of an application, under Clause 14 [*Contract Price and Payment*], for a payment certificate.

1.1.5 Works and Goods

1.1.5.1 "**Contractor's Equipment**" means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes Temporary Works, Employer's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

1.1.5.2 "**Goods**" means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

1.1.5.3 "**Materials**" means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

1.1.5.4 "**Permanent Works**" means the permanent works to be executed by the Contractor under the Contract.

1.1.5.5 "**Plant**" means the apparatus, machinery and vehicles intended to form or forming part of the Permanent Works.

1.1.5.6 "**Section**" means a part of the Works specified in the Appendix to Tender as a Section (if any).

1.1.5.7 "**Temporary Works**" means all temporary works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

1.1.5.8 "**Works**" mean the Permanent Works and the Temporary Works, or either of them as appropriate.

1.1.6 Other Definitions

1.1.6.1 "**Contractor's Documents**" means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

1.1.6.2 "**Country**" means the country in which the Site (or most of it) is located, where the Permanent Works are to be executed.

1.1.6.3 "**Employer's Equipment**" means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Employer.

1.1.6.4 "**Force Majeure**" is defined in Clause 19 [*Force Majeure*].

1.1.6.5 "**Laws**" means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.

1.1.6.6 "Performance Security" means the security (or securities, if any) under Sub-Clause 4.2 [*Performance Security*].

1.1.6.7 "Site" means the places where the Permanent Works are to be executed and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site.

1.1.6.8 "Unforeseeable" means not reasonably foreseeable by an experienced contractor by the date for submission of the Tender.

1.1.6.9 "Variation" means any change to the Works, which is instructed or approved as a variation under Clause 13 [*Variations and Adjustments*].

1.2 **Interpretation**

In the Contract, except where the context requires otherwise:

(a) words indicating one gender include all genders;
(b) words indicating the singular also include the plural and words indicating the plural also include the singular;
(c) provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing, and
(d) "written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record.

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

1.3 **Communications**

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

(a) in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Appendix to Tender; and
(b) delivered, sent or transmitted to the address for the recipient's communications as stated in the Appendix to Tender. However:

(i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
(ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

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

1.4 **Law and Language**

The Contract shall be governed by the law of the country (or other jurisdiction) stated in the Appendix to Tender.

If there are versions of any part of the Contract which are written in more than one language, the version which is in the ruling language stated in the Appendix to Tender shall prevail.

The language for communications shall be that stated in the Appendix to Tender. If no language is stated there, the language for communications shall be the language in which the Contract (or most of it) is written.

1.5

Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

(a) the Contract Agreement (if any),
(b) the Letter of Acceptance,
(c) the Letter of Tender,
(d) the Particular Conditions,
(e) these General Conditions,
(f) the Specification,
(g) the Drawings, and
(h) the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

1.6

Contract Agreement

The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless they agree otherwise. The Contract Agreement shall be based upon the form annexed to the Particular Conditions. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer.

1.7

Assignment

Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party:

(a) may assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party, and
(b) may, as security in favour of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract.

1.8

Care and Supply of Documents

The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.

Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer six copies of each of the Contractor's Documents.

The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.

If a Party becomes aware of an error or defect of a technical nature in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

1.9 Delayed Drawings or Instructions

The Contractor shall give notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, which shall be reasonable. The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and details of the nature and amount of the delay or disruption likely to be suffered if it is late.

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

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

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

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

1.10 Employer's Use of Contractor's Documents

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

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

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

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

1.11 Contractor's Use of Employer's Documents

As between the Parties, the Employer shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Employer. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract. They shall not,

without the Employer's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

1.12
Confidential Details

The Contractor shall disclose all such confidential and other information as the Engineer may reasonably require in order to verify the Contractor's compliance with the Contract.

1.13
Compliance with Laws

The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions:

(a) the Employer shall have obtained (or shall obtain) the planning, zoning or similar permission for the Permanent Works, and any other permissions described in the Specification as having been (or being) obtained by the Employer; and the Employer shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and

(b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Employer harmless against and from the consequences of any failure to do so.

1.14
Joint and Several Liability

If the Contractor constitutes (under applicable Laws) a joint venture, consortium or other unincorporated grouping of two or more persons:

(a) these persons shall be deemed to be jointly and severally liable to the Employer for the performance of the Contract.

(b) these persons shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these persons; and

(c) the Contractor shall not alter its composition or legal status without the prior consent of the Employer.

2 The Employer

2.1
Right of Access to the Site

The Employer shall give the Contractor right of access to, and possession of, all parts of the Site within the time (or times) stated in the Appendix to Tender. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Employer is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Employer shall do so in the time and manner stated in the Specification. However, the Employer may withhold any such right or possession until the Performance Security has been received.

If no such time is stated in the Appendix to Tender, the Employer shall give the Contractor right of access to, and possession of, the Site within such times as may be required to enable the Contractor to proceed in accordance with the programme submitted under Sub-Clause 8.3 [*Programme*].

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

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

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

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

2.2

Permits, Licences or Approvals

The Employer shall (where he is in a position to do so) provide reasonable assistance to the Contractor at the request of the Contractor:

(a) by obtaining copies of the Laws of the Country which are relevant to the Contract but are not readily available, and
(b) for the Contractor's applications for any permits, licences or approvals required by the Laws of the Country:

  (i) which the Contractor is required to obtain under Sub-Clause 1.13 [*Compliance with Laws*],
  (ii) for the delivery of Goods, including clearance through customs, and
  (iii) for the export of Contractor's Equipment when it is removed from the Site.

2.3

Employer's Personnel

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

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

2.4

Employer's Financial Arrangements

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

2.5

Employer's Claims

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

The notice shall be given as soon as practicable after the Employer became aware of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.

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

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

3 The Engineer

3.1 Engineer's Duties and Authority

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

The Engineer shall have no authority to amend the Contract.

The Engineer may exercise the authority attributable to the Engineer as specified in or necessarily to be implied from the Contract. If the Engineer is required to obtain the approval of the Employer before exercising a specified authority, the requirements shall be as stated in the Particular Conditions. The Employer undertakes not to impose further constraints on the Engineer's authority, except as agreed with the Contractor.

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

Except as otherwise stated in these Conditions:

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

3.2 Delegation by the Engineer

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

Assistants shall be suitably qualified persons, who are competent to carry out these

duties and exercise this authority, and who are fluent in the language for communications defined in Sub-Clause 1.4 [*Law and Language*].

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

(a) any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Engineer to reject the work, Plant or Materials;
(b) if the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

3.3 Instructions of the Engineer

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

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

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

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

3.4 Replacement of the Engineer

If the Employer intends to replace the Engineer, the Employer shall, not less than 42 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended replacement Engineer. The Employer shall not replace the Engineer with a person against whom the Contractor raises reasonable objection by notice to the Employer, with supporting particulars.

3.5 Determinations

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

The Engineer shall give notice to both Parties of each agreement or determination, with supporting particulars. Each Party shall give effect to each agreement or determination unless and until revised under Clause 20 [*Claims, Disputes and Arbitration*].

The Contractor

4.1 Contractor's General Obligations

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

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

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

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

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

(a) the Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the procedures specified in the Contract;

(b) these Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [*Law and Language*], and shall include additional information required by the Engineer to add to the Drawings for co-ordination of each Party's designs;

(c) the Contractor shall be responsible for this part and it shall, when the Works are completed, be fit for such purposes for which the part is intended as are specified in the Contract; and

(d) prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the "as-built" documents and operation and maintenance manuals in accordance with the Specification and in sufficient detail for the Employer to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking over under Sub-Clause 10.1 [*Taking Over of the Works and Sections*] until these documents and manuals have been submitted to the Engineer.

4.2 Performance Security

The Contractor shall obtain (at his cost) a Performance Security for proper performance, in the amount and currencies stated in the Appendix to Tender. If an amount is not stated in the Appendix to Tender, this Sub-Clause shall not apply.

The Contractor shall deliver the Performance Security to the Employer within 28 days after receiving the Letter of Acceptance, and shall send a copy to the Engineer. The Performance Security shall be issued by an entity and from within a country (or other

jurisdiction) approved by the Employer, and shall be in the form annexed to the Particular Conditions or in another form approved by the Employer.

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

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

(a) failure by the Contractor to extend the validity of the Performance Security as described in the preceding paragraph, in which event the Employer may claim the full amount of the Performance Security,
(b) failure by the Contractor to pay the Employer an amount due, as either agreed by the Contractor or determined under Sub-Clause 2.5 [*Employer's Claims*] or Clause 20 [*Claims, Disputes and Arbitration*], within 42 days after this agreement or determination,
(c) failure by the Contractor to remedy a default within 42 days after receiving the Employer's notice requiring the default to be remedied, or
(d) circumstances which entitle the Employer to termination under Sub-Clause 15.2 [*Termination by Employer*], irrespective of whether notice of termination has been given.

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

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

4.3 Contractor's Representative

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

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

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

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

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

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

The Contractor's Representative and all these persons shall be fluent in the language for communications defined in Sub-Clause 1.4 [*Law and Language*].

4.4 Subcontractors

The Contractor shall not subcontract the whole of the Works.

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

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

4.5 Assignment of Benefit of Subcontract

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

4.6 Co-operation

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

(a) the Employer's Personnel,
(b) any other contractors employed by the Employer, and
(c) the personnel of any legally constituted public authorities,

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

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

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

4.7
Setting Out

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

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

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

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

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

4.8
Safety Procedures

The Contractor shall:

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

4.9
Quality Assurance

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

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

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

4.10
Site Data

The Employer shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Employer's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Employer

shall similarly make available to the Contractor all such data which come into the Employer's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.

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

(a) the form and nature of the Site, including sub-surface conditions,
(b) the hydrological and climatic conditions,
(c) the extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects,
(d) the Laws, procedures and labour practices of the Country, and
(e) the Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.

4.11 Sufficiency of the Accepted Contract Amount

The Contractor shall be deemed to:

(a) have satisfied himself as to the correctness and sufficiency of the Accepted Contract Amount, and
(b) have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in Sub-Clause 4.10 [*Site Data*].

Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.

4.12 Unforeseeable Physical Conditions

In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.

If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give notice to the Engineer as soon as practicable.

This notice shall describe the physical conditions, so that they can be inspected by the Engineer, and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Engineer may give. If an instruction constitutes a Variation, Clause 13 [*Variations and Adjustments*] shall apply.

If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

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

After receiving such notice and inspecting and/or investigating these physical conditions, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Engineer may also review whether other physical conditions in similar parts of the Works (if any) were more favourable than could reasonably have been foreseen when the Contractor submitted the Tender. If and to the extent that these more favourable conditions were encountered, the Engineer may proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under sub-paragraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.

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

4.13 Rights of Way and Facilities

The Contractor shall bear all costs and charges for special and/or temporary rights-of-way which he may require, including those for access to the Site. The Contractor shall also obtain, at his risk and cost, any additional facilities outside the Site which he may require for the purposes of the Works.

4.14 Avoidance of Interference

The Contractor shall not interfere unnecessarily or improperly with:

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

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

4.15 Access Route

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

Except as otherwise stated in these Conditions:

(a) the Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;
(b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
(c) the Employer shall not be responsible for any claims which may arise from the use or otherwise of any access route.

(d) the Employer does not guarantee the suitability or availability of particular access routes, and

(e) Costs due to non-suitability or non-availability, for the use required by the Contractor, of access routes shall be borne by the Contractor.

4.16 Transport of Goods

Unless otherwise stated in the Particular Conditions:

(a) the Contractor shall give the Engineer not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;

(b) the Contractor shall be responsible for packing, loading, transporting, receiving, unloading, storing and protecting all Goods and other things required for the Works; and

(c) the Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods, and shall negotiate and pay all claims arising from their transport.

4.17 Contractor's Equipment

The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.

4.18 Protection of the Environment

The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

The Contractor shall ensure that emissions, surface discharges and effluent from the Contractor's activities shall not exceed the values indicated in the Specification, and shall not exceed the values prescribed by applicable Laws.

4.19 Electricity, Water and Gas

The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require.

The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specification. The Contractor shall, at his risk and cost, provide any apparatus necessary for his use of these services and for measuring the quantities consumed.

The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [*Employer's Claims*] and Sub-Clause 3.5 [*Determinations*]. The Contractor shall pay these amounts to the Employer.

4.20 Employer's Equipment and Free-Issue Material

The Employer shall make the Employer's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:

(a) the Employer shall be responsible for the Employer's Equipment, except that

(b) the Contractor shall be responsible for each item of Employer's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.

The appropriate quantities and the amounts due (at such stated prices) for the use of Employer's Equipment shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [*Employer's Claims*] and Sub-Clause 3.5 [*Determinations*]. The Contractor shall pay these amounts to the Employer.

The Employer shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Specification. The Employer shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them, and shall promptly give notice to the Engineer of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Employer shall immediately rectify the notified shortage, defect or default.

After this visual inspection, the free-issue materials shall come under the care, custody and control of the Contractor. The Contractor's obligations of inspection, care, custody and control shall not relieve the Employer of liability for any shortage, defect or default not apparent from a visual inspection.

4.21 Progress Reports

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

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

Each report shall include:

(a) charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [*Nominated Subcontractors*]),
(b) photographs showing the status of manufacture and of progress on the Site;
(c) for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:

  (i) commencement of manufacture,
  (ii) Contractor's inspections,
  (iii) tests, and
  (iv) shipment and arrival at the Site;

(d) the details described in Sub-Clause 6.10 [*Records of Contractor's Personnel and Equipment*];
(e) copies of quality assurance documents, test results and certificates of Materials;
(f) list of notices given under Sub-Clause 2.5 [*Employer's Claims*] and notices given under Sub-Clause 20.1 [*Contractor's Claims*];
(g) safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and

(h) comparisons of actual and planned progress, with details of any events or circumstances which may jeopardise the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

4.22

Security of the Site

Unless otherwise stated in the Particular Conditions:

(a) the Contractor shall be responsible for keeping unauthorised persons off the Site, and

(b) authorised persons shall be limited to the Contractor's Personnel and the Employer's Personnel; and to any other personnel notified to the Contractor, by the Employer or the Engineer, as authorised personnel of the Employer's other contractors on the Site.

4.23

Contractor's Operations on Site

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

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

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

4.24

Fossils

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

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

(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*], and

(b) payment of any such Cost, which shall be included in the Contract Price.

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

Nominated Subcontractors

5.1
Definition of "nominated Subcontractor"

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

(a) who is stated in the Contract as being a nominated Subcontractor, or
(b) whom the Engineer, under Clause 13 [*Variations and Adjustments*], instructs the Contractor to employ as a Subcontractor.

5.2
Objection to Nomination

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

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

(i) undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract, and
(ii) indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities.

5.3
Payments to nominated Subcontractors

The Contractor shall pay to the nominated Subcontractor the amounts which the Engineer certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with sub-paragraph (b) of Sub-Clause 13.5 [*Provisional Sums*], except as stated in Sub-Clause 5.4 [*Evidence of Payments*].

5.4
Evidence of Payments

Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

(a) submits this reasonable evidence to the Engineer, or
(b) (i) satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
(ii) submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement,

then the Employer may (at his sole discretion) pay, direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable

deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub paragraphs (a) or (b) above. The Contractor shall then repay, to the Employer, the amount which the nominated Subcontractor was directly paid by the Employer.

Staff and Labour

6.1 Engagement of Staff and Labour

Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, housing, feeding and transport.

6.2 Rates of Wages and Conditions of Labour

The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.

6.3 Persons in the Service of Employer

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Employer's Personnel.

6.4 Labour Laws

The Contractor shal comply with all the relevant labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.

The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

6.5 Working Hours

No work shall be carried out on the Site on locally recognised days of rest, or outside the normal working hours stated in the Appendix to Tender, unless:

(a) otherwise stated in the Contract,
(b) the Engineer gives consent, or
(c) the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer.

6.6 Facilities for Staff and Labour

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.

The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

6.7 Health and Safety

The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities,

the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Engineer may reasonably require.

6.8

Contractor's Superintendence

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

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

6.9

Contractor's Personnel

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

(a) persists in any misconduct or lack of care,
(b) carries out duties incompetently or negligently,
(c) fails to conform with any provisions of the Contract, or
(d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

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

6.10

Records of Contractor's Personnel and Equipment

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

6.11

Disorderly Conduct

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

Plant, Materials and Workmanship

7.1 Manner of Execution

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

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

7.2 Samples

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

(a) manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost, and
(b) additional samples instructed by the Engineer as a Variation.

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

7.3 Inspection

The Employer's Personnel shall at all reasonable times:

(a) have full access to all parts of the Site and to all places from which natural Materials are being obtained, and
(b) during production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of Materials.

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

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

7.4 Testing

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

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

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

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

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

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

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

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

7.5 Rejection

If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.

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

7.6 Remedial Work

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

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

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

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

7.7

Ownership of Plant and Materials

Each item of Plant and Materials shall, to the extent consistent with the Laws of the Country, become the property of the Employer at whichever is the earlier of the following times, free from liens and other encumbrances:

(a) when it is delivered to the Site;
(b) when the Contractor is entitled to payment of the value of the Plant and Materials under Sub-Clause 8.10 [*Payment for Plant and Materials in Event of Suspension*].

7.8

Royalties

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

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

Commencement, Delays and Suspension

8.1

Commencement of Works

The Engineer shall give the Contractor not less than 7 days' notice of the Commencement Date. Unless otherwise stated in the Particular Conditions, the Commencement Date shall be within 42 days after the Contractor receives the Letter of Acceptance.

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

8.2

Time for Completion

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

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

8.3

Programme

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

(a) the order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing,

(b) each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [*Nominated Subcontractors*]),

(c) the sequence and timing of inspections and tests specified in the Contract, and

(d) a supporting report which includes:

(i) a general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and

(ii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.

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

The Contractor shall promptly give notice to the Engineer of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price or delay the execution of the Works. The Engineer may require the Contractor to submit an estimate of the anticipated effect of the future event or circumstances, and/or a proposal under Sub-Clause 13.3 [*Variation Procedure*].

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

8.4

Extension of Time for Completion

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

(a) a Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 13.3 [*Variation Procedure*]) or other substantial change in the quantity of an item of work included in the Contract,

(b) a cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions,

(c) exceptionally adverse climatic conditions,

(d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions, or

(e) any delay, impediment or prevention caused by or attributable to the Employer, the Employer's Personnel, or the Employer's other contractors on the Site.

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

8.5 Delays Caused by Authorities

If the following conditions apply, namely:

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

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

8.6 Rate of Progress

If, at any time:

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

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

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

8.7 Delay Damages

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

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

8.8 Suspension of Work

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

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

8.9 Consequences of Suspension

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

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

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

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

8.10 Payment for Plant and Materials in Event of Suspension

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

(a) the work on Plant or delivery of Plant and/or Materials has been suspended for more than 28 days, and
(b) the Contractor has marked the Plant and/or Materials as the Employer's property in accordance with the Engineer's instructions.

8.11 Prolonged Suspension

If the suspension under Sub-Clause 8.8 [*Suspension of Work*] has continued for more than 84 days, the Contractor may request the Engineer's permission to proceed. If the Engineer does not give permission within 28 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 13 [*Variations and Adjustments*] of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 [*Termination by Contractor*].

8.12 Resumption of Work

After the permission or instruction to proceed is given, the Contractor and the Engineer shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension.

9 Tests on Completion

9.1 Contractor's Obligations

The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub Clause 7.4 [*Testing*], after providing the documents in accordance with sub-paragraph (d) of Sub Clause 4.1 [*Contractor's General Obligations*].

The Contractor shall give to the Engineer not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.

In considering the results of the Tests on Completion, the Engineer shall make

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

10.3

Interference with Tests on Completion

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

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

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

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

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

10.4

Surfaces Requiring Reinstatement

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

11 Defects Liability

11.1

Completion of Outstanding Work and Remedying Defects

In order that the Works and Contractor's Documents, and each Section, shall be in the condition required by the Contract (fair wear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:

(a) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer, and
(b) execute all work required to remedy defects or damage, as may be notified by (or on behalf of) the Employer on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).

If a defect appears or damage occurs, the Contractor shall be notified accordingly, by (or on behalf of) the Employer

11.2

Cost of Remedying Defects

All work referred to in sub paragraph (b) of Sub-Clause 11.1 [*Completion of Outstanding Work and Remedying Defects*] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:

(a) any design for which the Contractor is responsible,
(b) Plant, Materials or workmanship not being in accordance with the Contract, or
(c) failure by the Contractor to comply with any other obligation.

If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Employer, and Sub-Clause 13.3 [*Variation Procedure*] shall apply.

11.3

Extension of Defects Notification Period

The Employer shall be entitled subject to Sub-Clause 2.5 [*Employer's Claims*] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or damage. However, a Defects Notification Period shall not be extended by more than two years.

If delivery and/or erection of Plant and/or Materials was suspended under Sub-Clause 8.8 [*Suspension of Work*] or Sub-Clause 16.1 [*Contractor's Entitlement to Suspend Work*], the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/or Materials would otherwise have expired.

11.4

Failure to Remedy Defects

If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by (or on behalf of) the Employer, on or by which the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.

If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under Sub-Clause 11.2 [*Cost of Remedying Defects*], the Employer may (at his option):

(a) carry out the work himself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to Sub-Clause 2.5 [*Employer's Claims*] pay to the Employer the costs reasonably incurred by the Employer in remedying the defect or damage;
(b) require the Engineer to agree or determine a reasonable reduction in the Contract Price in accordance with Sub-Clause 3.5 [*Determinations*]; or
(c) if the defect or damage deprives the Employer of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contract or otherwise, the Employer shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

11.5 Removal of Defective Work

If the defect or damage cannot be remedied expeditiously on the Site and the Employer gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security.

11.6 Further Tests

If the work of remedying of any defect or damage may affect the performance of the Works, the Engineer may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 28 days after the defect or damage is remedied.

These tests shall be carried out in accordance with the terms applicable to the previous tests except that they shall be carried out at the risk and cost of the Party liable, under Sub-Clause 11.2 [*Cost of Remedying Defects*], for the cost of the remedial work.

11.7 Right of Access

Until the Performance Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Employer's reasonable security restrictions.

11.8 Contractor to Search

The Contractor shall, if required by the Engineer, search for the cause of any defect, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 [*Cost of Remedying Defects*], the Cost of the search plus reasonable profit shall be agreed or determined by the Engineer in accordance with Sub-Clause 3.5 [*Determinations*] and shall be included in the Contract Price.

11.9 Performance Certificate

Performance of the Contractor's obligations shall not be considered to have been completed until the Engineer has issued the Performance Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.

The Engineer shall issue the Performance Certificate within 28 days after the latest of the expiry dates of the Defects Notification Periods, or as soon thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects. A copy of the Performance Certificate shall be issued to the Employer.

Only the Performance Certificate shall be deemed to constitute acceptance of the Works.

11.10 Unfulfilled Obligations

After the Performance Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

11.11 Clearance of Site

Upon receiving the Performance Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

If all these items have not been removed within 28 days after the Employer receives a copy of the Performance Certificate, the Employer may sell or

otherwise dispose of any remaining items. The Employer shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Employer's costs, the Contractor shall pay the outstanding balance to the Employer.

12 Measurement and Evaluation

12.1 Works to be Measured

The Works shall be measured, and valued for payment, in accordance with this Clause.

Whenever the Engineer requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:

(a) promptly either attend or send another qualified representative to assist the Engineer in making the measurement, and
(b) supply any particulars requested by the Engineer.

If the Contractor fails to attend or send a representative, the measurement made by (or on behalf of) the Engineer shall be accepted as accurate.

Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.

If the Contractor examines and disagrees the records, and/or does not sign them as agreed, then the Contractor shall give notice to the Engineer of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Engineer shall review the records and either confirm or vary them. If the Contractor does not so give notice to the Engineer within 14 days after being requested to examine the records, they shall be accepted as accurate.

12.2 Method of Measurement

Except as otherwise stated in the Contract and notwithstanding local practice:

(a) measurement shall be made of the net actual quantity of each item of the Permanent Works, and
(b) the method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

12.3 Evaluation

Except as otherwise stated in the Contract, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine the Contract Price by evaluating each item of work, applying the measurement agreed or determined in accordance with the above Sub-Clauses 12.1 and 12.2 and the appropriate rate or price for the item.

For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the Contract or, if there is no such item, specified for similar work. However, a new rate or price shall be appropriate for an item of work if.

(a) (i) the measured quantity of the item is changed by more than 10% from the quantity of this item in the Bill of Quantities or other Schedule,

(ii) this change in quantity multiplied by such specified rate for this item exceeds 0.01% of the Accepted Contract Amount,

(iii) this change in quantity directly changes the Cost per unit quantity of this item by more than 1%, and

(iv) this item is not specified in the Contract as a "fixed rate item";

or

(b) (i) the work is instructed under Clause 13 [*Variations and Adjustments*],

(ii) no rate or price is specified in the Contract for this item, and

(iii) no specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.

Each new rate or price shall be derived from any relevant rates or prices in the Contract, with reasonable adjustments to take account of the matters described in sub-paragraph (a) and/or (b), as applicable. If no rates or prices are relevant for the derivation of a new rate or price, it shall be derived from the reasonable Cost of executing the work, together with reasonable profit, taking account of any other relevant matters.

Until such time as an appropriate rate or price is agreed or determined, the Engineer shall determine a provisional rate or price for the purposes of Interim Payment Certificates.

12.4

Omissions

Whenever the omission of any work forms part (or all) of a Variation, the value of which has not been agreed, if:

(a) the Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount;

(b) the omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and

(c) this cost is not deemed to be included in the evaluation of any substituted work;

then the Contractor shall give notice to the Engineer accordingly, with supporting particulars. Upon receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine this cost, which shall be included in the Contract Price.

13 Variations and Adjustments

13.1

Right to Vary

Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal.

The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Engineer stating (with supporting particulars) that the Contractor cannot readily obtain the Goods required for the Variation. Upon receiving this notice, the Engineer shall cancel, confirm or vary the instruction.

Each Variation may include:

(a) changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation),
(b) changes to the quality and other characteristics of any item of work,
(c) changes to the levels, positions and/or dimensions of any part of the Works,
(d) omission of any work unless it is to be carried out by others,
(e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or
(f) changes to the sequence or timing of the execution of the Works.

The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Engineer instructs or approves a Variation.

13.2 **Value Engineering**

The Contractor may, at any time, submit to the Engineer a written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Employer of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Employer of the completed Works, or (iv) otherwise be of benefit to the Employer.

The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.3 [*Variation Procedure*].

If a proposal which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:

(a) the Contractor shall design this part,
(b) sub-paragraphs (a) to (d) of Sub-Clause 4.1 [*Contractor's General Obligations*] shall apply, and
(c) if this change results in a reduction in the contract value of this part, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine a fee, which shall be included in the Contract Price. This fee shall be half (50%) of the difference between the following amounts:

  (i) such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause 13.7 [*Adjustments for Changes in Legislation*] and Sub-Clause 13.8 [*Adjustments for Changes in Cost*],and
  (ii) the reduction (if any) in the value to the Employer of the varied works, taking account of any reductions in quality, anticipated life or operational efficiencies.

However, if amount (i) is less than amount (ii), there shall not be a fee.

13.3 **Variation Procedure**

If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:

(a) a description of the proposed work to be performed and a programme for its execution,
(b) the Contractor's proposal for any necessary modifications to the programme according to Sub Clause 8.3 [*Programme*] and to the Time for Completion, and
(c) the Contractor's proposal for evaluation of the Variation.

The Engineer shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 [*Value Engineering*] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.

Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.

Each Variation shall be evaluated in accordance with Clause 12 [*Measurement and Evaluation*] unless the Engineer instructs or approves otherwise in accordance with this Clause.

13.4

Payment in Applicable Currencies

If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

13.5

Provisional Sums

Each Provisional Sum shall only be used, in whole or in part, in accordance with the Engineer's instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Engineer shall have instructed. For each Provisional Sum, the Engineer may instruct:

(a) work to be executed (including Plant, Materials or services to be supplied) by the Contractor and valued under Sub-Clause 13.3 [*Variation Procedure*]; and/or

(b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 5 [*Nominated Subcontractors*]) or otherwise; and for which there shall be included in the Contract Price:

  (i) the actual amounts paid (or due to be paid) by the Contractor, and

  (ii) a sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If there is no such rate, the percentage rate stated in the Appendix to Tender shall be applied.

The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.

13.6

Daywork

For work of a minor or incidental nature, the Engineer may instruct that a Variation shall be executed on a daywork basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.

Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.

Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Engineer accurate statements in duplicate which shall include the following details of the resources used in executing the previous day's work:

(a) the names, occupations and time of Contractor's Personnel,

(b) the identification, type and time of Contractor's Equipment and Temporary Works, and

(c) the quantities and types of Plant and Materials used.

One copy of each statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor. The Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [*Application for Interim Payment Certificates*].

13.7

Adjustments for Changes in Legislation

The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub Clause 20.1 [*Contractor's Claims*] to:

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

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

13.8

Adjustments for Changes in Cost

In this Sub Clause, "table of adjustment data" means the completed table of adjustment data included in the Appendix to Tender. If there is no such table of adjustment data, this Sub-Clause shall not apply.

If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labour, Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in Costs is not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.

The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be of the following general type:

$$Pn = a + b\frac{Ln}{Lo} + c\frac{En}{Eo} + d\frac{Mn}{Mo} + \ldots\ldots$$

where:

"Pn" is the adjustment multiplier to be applied to the estimated contract value in the relevant currency of the work carried out in period "n", this period being a month unless otherwise stated in the Appendix to Tender;

"a" is a fixed coefficient, stated in the relevant table of adjustment data, representing the non-adjustable portion in contractual payments;

"b", "c", "d", ... are coefficients representing the estimated proportion of each cost element related to the execution of the Works, as stated in the relevant

table of adjustment data; such tabulated cost elements may be indicative of resources such as labour, equipment and materials;

"Ln", "En", "Mn", ... are the current cost indices or reference prices for period "n", expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the date 49 days prior to the last day of the period (to which the particular Payment Certificate relates); and

"Lo", "Eo", "Mo", ... are the base cost indices or reference prices, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the Base Date.

The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, it shall be determined by the Engineer. For this purpose, reference shall be made to the values of the indices at stated dates (quoted in the fourth and fifth columns respectively of the table) for the purposes of clarification of the source; although those dates (and thus these values) may not correspond to the base cost indices.

In cases where the "currency of index" (stated in the table) is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the central bank of the Country, of this relevant currency on the above date for which the index is required to be applicable.

Until such time as each current cost index is available, the Engineer shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.

If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices thereafter shall be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time for Completion of the Works, or (ii) the current index or price; whichever is more favourable to the Employer.

The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable as a result of Variations.

14 Contract Price and Payment

14.1 The Contract Price

Unless otherwise stated in the Particular Conditions:

(a) the Contract Price shall be agreed or determined under Sub-Clause 12.3 [*Evaluation*] and be subject to adjustments in accordance with the Contract;

(b) the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [*Adjustments for Changes in Legislation*];

(c) any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:

(i) of the Works which the Contractor is required to execute, or

(ii) for the purposes of Clause 12 [*Measurement and Evaluation*]; and

(d) the Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules. The Engineer may take account of the breakdown when preparing Payment Certificates, but shall not be bound by it.

14.2

Advance Payment

The Employer shall make an advance payment, as an interest-free loan for mobilisation, when the Contractor submits a guarantee in accordance with this Sub-Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the Appendix to Tender.

Unless and until the Employer receives this guarantee, or if the total advance payment is not stated in the Appendix to Tender, this Sub-Clause shall not apply.

The Engineer shall issue an Interim Payment Certificate for the first instalment after receiving a Statement (under Sub-Clause 14.3 [*Application for Interim Payment Certificates*]) and after the Employer receives (i) the Performance Security in accordance with Sub Clause 4.2 [*Performance Security*] and (ii) a guarantee in amounts and currencies equal to the advance payment. This guarantee shall be issued by an entity and from within a country (or other jurisdiction) approved by the Employer, and shall be in the form annexed to the Particular Conditions or in another form approved by the Employer.

The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount may be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

The advance payment shall be repaid through percentage deductions in Payment Certificates. Unless other percentages are stated in the Appendix to Tender:

(a) deductions shall commence in the Payment Certificate in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds ten per cent (10%) of the Accepted Contract Amount less Provisional Sums; and

(b) deductions shall be made at the amortisation rate of one quarter (25%) of the amount of each Payment Certificate (excluding the advance payment and deductions and repayments of retention) in the currencies and proportions of the advance payment, until such time as the advance payment has been repaid.

If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [*Termination by Employer*], Clause 16 [*Suspension and Termination by Contractor*] or Clause 19 [*Force Majeure*] (as the case may be), the whole of the balance then outstanding shall immediately become due and payable by the Contractor to the Employer.

14.3

Application for Interim Payment Certificates

The Contractor shall submit a Statement in six copies to the Engineer after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers himself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [*Progress Reports*].

The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

(a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);

(b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-Clause 13.7 [*Adjustments for Changes in Legislation*] and Sub Clause 13.8 [*Adjustments for Changes in Cost*];

(c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in the Appendix to Tender to the total of the above amounts, until the amount so retained by the Employer reaches the limit of Retention Money (if any) stated in the Appendix to Tender;

(d) any amounts to be added and deducted for the advance payment and repayments in accordance with Sub-Clause 14.2 [*Advance Payment*];

(e) any amounts to be added and deducted for Plant and Materials in accordance with Sub Clause 14.5 [*Plant and Materials intended for the Works*];

(f) any other additions or deductions which may have become due under the Contract or otherwise, including those under Clause 20 [*Claims, Disputes and Arbitration*]; and

(g) the deduction of amounts certified in all previous Payment Certificates.

14.4 Schedule of Payments

If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

(a) the instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of sub-paragraph (a) of Sub-Clause 14.3 [*Application for Interim Payment Certificates*];

(b) Sub-Clause 14.5 [*Plant and Materials intended for the Works*] shall not apply; and

(c) if these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less than that on which this schedule of payments was based, then the Engineer may proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine revised instalments, which shall take account of the extent to which progress is less than that on which the instalments were previously based.

If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period. The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking Over Certificate has been issued for the Works.

14.5 Plant and Materials intended for the Works

If this Sub Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3, (i) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub paragraph (a) of Sub-Clause 14.3 [*Application for Interim Payment Certificates*].

If the lists referred to in sub paragraphs (b)(i) or (c)(i) below are not included in the Appendix to Tender, this Sub Clause shall not apply.

The Engineer shall determine and certify each addition if the following conditions are satisfied:

(a) the Contractor has:

(i) kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection, and

(ii) submitted a statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence;

and either:

(b) the relevant Plant and Materials:

(i) are those listed in the Appendix to Tender for payment when shipped,

(ii) have been shipped to the Country, en route to the Site, in accordance with the Contract; and

(iii) are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Engineer together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Employer in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [*Advance Payment*] and shall be valid until the Plant and Materials are properly stored on Site and protected against loss, damage or deterioration;

or

(c) the relevant Plant and Materials:

(i) are those listed in the Appendix to Tender for payment when delivered to the Site, and

(ii) have been delivered to and are properly stored on the Site, are protected against loss, damage or deterioration, and appear to be in accordance with the Contract.

The additional amount to be certified shall be the equivalent of eighty percent of the Engineer's determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials.

The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under sub-paragraph (a) of Sub-Clause 14.3 [*Application for Interim Payment Certificates*]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

14.6 Issue of Interim Payment Certificates

No amount will be certified or paid until the Employer has received and approved the Performance Security. Thereafter, the Engineer shall, within 28 days after receiving a Statement and supporting documents, issue to the Employer an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with supporting particulars.

However, prior to issuing the Taking-Over Certificate for the Works, the Engineer shall not be bound to issue an Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated in the Appendix to Tender. In this event, the Engineer shall give notice to the Contractor accordingly.

An Interim Payment Certificate shall not be withheld for any other reason, although:

(a) if any thing supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or

(b) if the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the Engineer, the value of this work or obligation may be withheld until the work or obligation has been performed.

The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer's acceptance, approval, consent or satisfaction.

14.7 Payment

The Employer shall pay to the Contractor:

(a) the first instalment of the advance payment within 42 days after issuing the Letter of Acceptance or within 21 days after receiving the documents in accordance with Sub-Clause 4.2 [*Performance Security*] and Sub-Clause 14.2 [*Advance Payment*], whichever is later;

(b) the amount certified in each Interim Payment Certificate within 56 days after the Engineer receives the Statement and supporting documents; and

(c) the amount certified in the Final Payment Certificate within 56 days after the Employer receives this Payment Certificate.

Payment of the amount due in each currency shall be made into the bank account, nominated by the Contractor, in the payment country (for this currency) specified in the Contract.

14.8 Delayed Payment

If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [*Payment*], the Contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [*Payment*], irrespective (in the case of its sub-paragraph (b)) of the date on which any Interim Payment Certificate is issued.

Unless otherwise stated in the Particular Conditions, these financing charges shall be calculated at the annual rate of three percentage points above the discount rate of the central bank in the country of the currency of payment, and shall be paid in such currency.

The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy.

14.9 Payment of Retention Money

When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate is issued for a Section or part of the Works, a proportion of the Retention Money shall be certified and paid. This proportion shall be two-fifths (40%) of the proportion calculated by dividing the estimated contract value of the Section or part, by the estimated final Contract Price.

Promptly after the latest of the expiry dates of the Defects Notification Periods, the outstanding balance of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate was issued for a Section, a

proportion of the second half of the Retention Money shall be certified and paid promptly after the expiry date of the Defects Notification Period for the Section. This proportion shall be two fifths (40%) of the proportion calculated by dividing the estimated contract value of the Section by the estimated final Contract Price.

However, if any work remains to be executed under Clause 11 [*Defects Liability*], the Engineer shall be entitled to withhold certification of the estimated cost of this work until it has been executed.

When calculating these proportions, no account shall be taken of any adjustments under Sub Clause 13.7 [*Adjustments for Changes in Legislation*] and Sub-Clause 13.8 [*Adjustments for Changes in Cost*].

14.10 Statement at Completion

Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer six copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [*Application for Interim Payment Certificates*], showing:

(a) the value of all work done in accordance with the Contract up to the date stated in the Taking Over Certificate for the Works,
(b) any further sums which the Contractor considers to be due, and
(c) an estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this Statement at completion.

The Engineer shall then certify in accordance with Sub-Clause 14.6 [*Issue of Interim Payment Certificates*].

14.11 Application for Final Payment Certificate

Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:

(a) the value of all work done in accordance with the Contract, and
(b) any further sums which the Contractor considers to be due to him under the Contract or otherwise.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed. This agreed statement is referred to in these Conditions as the "Final Statement".

However if, following discussions between the Engineer and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.4 [*Obtaining Dispute Adjudication Board's Decision*] or Sub-Clause 20.5 [*Amicable Settlement*], the Contractor shall then prepare and submit to the Employer (with a copy to the Engineer) a Final Statement.

14.12 Discharge

When submitting the Final Statement, the Contractor shall submit a written discharge which confirms that the total of the Final Statement represents full and final settlement

of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date.

14.13

Issue of Final Payment Certificate

Within 28 days after receiving the Final Statement and written discharge in accordance with Sub-Clause 14.11 [*Application for Final Payment Certificate*] and Sub-Clause 14.12 [*Discharge*], the Engineer shall issue, to the Employer, the Final Payment Certificate which shall state:

(a) the amount which is finally due, and

(b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled, the balance (if any) due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [*Application for Final Payment Certificate*] and Sub-Clause 14.12 [*Discharge*], the Engineer shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 28 days, the Engineer shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

14.14

Cessation of Employer's Liability

The Employer shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

(a) in the Final Statement and also

(b) (except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 14.10 [*Statement at Completion*].

However, this Sub-Clause shall not limit the Employer's liability under his indemnification obligations, or the Employer's liability in any case of fraud, deliberate default or reckless misconduct by the Employer.

14.15

Currencies of Payment

The Contract Price shall be paid in the currency or currencies named in the Appendix to Tender. Unless otherwise stated in the Particular Conditions, if more than one currency is so named, payments shall be made as follows:

(a) if the Accepted Contract Amount was expressed in Local Currency only:

(i) the proportions or amounts of the Local and Foreign Currencies, and the fixed rates of exchange to be used for calculating the payments, shall be as stated in the Appendix to Tender, except as otherwise agreed by both Parties;

(ii) payments and deductions under Sub-Clause 13.5 [*Provisional Sums*] and Sub-Clause 13.7 [*Adjustments for Changes in Legislation*] shall be made in the applicable currencies and proportions; and

(iii) other payments and deductions under sub-paragraphs (a) to (d) of Sub-Clause 14.3 [*Application for Interim Payment Certificates*] shall be made in the currencies and proportions specified in sub-paragraph (a)(i) above;

(b) payment of the damages specified in the Appendix to Tender shall be made in the currencies and proportions specified in the Appendix to Tender:

(c) other payments to the Employer by the Contractor shall be made in the currency in which the sum was expended by the Employer, or in such currency as may be agreed by both Parties;

(d) if any amount payable by the Contractor to the Employer in a particular currency exceeds the sum payable by the Employer to the Contractor in that currency, the Employer may recover the balance of this amount from the sums otherwise payable to the Contractor in other currencies; and

(e) if no rates of exchange are stated in the Appendix to Tender, they shall be those prevailing on the Base Date and determined by the central bank of the Country.

15 Termination by Employer

15.1
Notice to Correct

If the Contractor fails to carry out any obligation under the Contract, the Engineer may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.

15.2
Termination by Employer

The Employer shall be entitled to terminate the Contract if the Contractor:

(a) fails to comply with Sub-Clause 4.2 [*Performance Security*] or with a notice under Sub Clause 15.1 [*Notice to Correct*],

(b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,

(c) without reasonable excuse fails:

  (i) to proceed with the Works in accordance with Clause 8 [*Commencement, Delays and Suspension*], or

  (ii) to comply with a notice issued under Sub-Clause 7.5 [*Rejection*] or Sub-Clause 7.6 [*Remedial Work*], within 28 days after receiving it,

(d) subcontracts the whole of the Works or assigns the Contract without the required agreement,

(e) becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, or

(f) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:

  (i) for doing or forbearing to do any action in relation to the Contract, or

  (ii) for showing or forbearing to show favour or disfavour to any person in relation to the Contract,

  or if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination.

In any of these events or circumstances, the Employer may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub paragraph (e) or (f), the Employer may by notice terminate the Contract immediately.

The Employer's election to terminate the Contract shall not prejudice any other rights of the Employer under the Contract or otherwise.

The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for him, to the Engineer. However, the Contractor shall use his best efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.

After termination the Employer may complete the Works and/or arrange for any other entities to do so. The Employer and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.

The Employer shall then give notice that the Contractor's Equipment and Temporary Works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Employer, these items may be sold by the Employer in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

15.3 Valuation at Date of Termination

As soon as practicable after a notice of termination under Sub-Clause 15.2 [*Termination by Employer*] has taken effect, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine the value of the Works, Goods and Contractor's Documents, and any other sums due to the Contractor for work executed in accordance with the Contract.

15.4 Payment after Termination

After a notice of termination under Sub Clause 15.2 [*Termination by Employer*] has taken effect, the Employer may:

(a) proceed in accordance with Sub-Clause 2.5 [*Employer's Claims*],
(b) withhold further payments to the Contractor until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Employer, have been established, and/or
(c) recover from the Contractor any losses and damages incurred by the Employer and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub Clause 15.3 [*Valuation at Date of Termination*]. After recovering any such losses, damages and extra costs, the Employer shall pay any balance to the Contractor.

15.5 Employer's Entitlement to Termination

The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security. The Employer shall not terminate the Contract under this Sub-Clause in order to execute the Works himself or to arrange for the Works to be executed by another contractor.

After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [*Cessation of Work and Removal of Contractor's Equipment*] and shall be paid in accordance with Sub-Clause 19.6 [*Optional Termination, Payment and Release*].

Suspension and Termination by Contractor

16.1
Contractor's Entitlement to Suspend Work

If the Engineer fails to certify in accordance with Sub-Clause 14.6 [*Issue of Interim Payment Certificates*] or the Employer fails to comply with Sub-Clause 2.4 [*Employer's Financial Arrangements*] or Sub Clause 14.7 [*Payment*], the Contractor may, after giving not less than 21 days' notice to the Employer, suspend work (or reduce the rate of work) unless and until the Contractor has received the Payment Certificate, reasonable evidence or payment, as the case may be and as described in the notice.

The Contractor's action shall not prejudice his entitlements to financing charges under Sub Clause 14.8 [*Delayed Payment*] and to termination under Sub-Clause 16.2 [*Termination by Contractor*].

If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.

If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

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

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

16.2
Termination by Contractor

The Contractor shall be entitled to terminate the Contract if:

(a) the Contractor does not receive the reasonable evidence within 42 days after giving notice under Sub Clause 16.1 [*Contractor's Entitlement to Suspend Work*] in respect of a failure to comply with Sub-Clause 2.4 [*Employer's Financial Arrangements*],
(b) the Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate,
(c) the Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in Sub-Clause 14.7 [*Payment*] within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5 [*Employer's Claims*]),
(d) the Employer substantially fails to perform his obligations under the Contract,
(e) the Employer fails to comply with Sub-Clause 1.6 [*Contract Agreement*] or Sub-Clause 1.7 [*Assignment*],
(f) a prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [*Prolonged Suspension*], or
(g) the Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the

benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events.

In any of these events or circumstances, the Contractor may, upon giving 14 days' notice to the Employer, terminate the Contract. However, in the case of sub-paragraph (f) or (g), the Contractor may by notice terminate the Contract immediately.

The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor under the Contract or otherwise.

16.3 Cessation of Work and Removal of Contractor's Equipment

After a notice of termination under Sub-Clause 15.5 [*Employer's Entitlement to Termination*], Sub Clause 16.2 [*Termination by Contractor*] or Sub-Clause 19.6 [*Optional Termination, Payment and Release*] has taken effect, the Contractor shall promptly:

(a) cease all further work, except for such work as may have been instructed by the Engineer for the protection of life or property or for the safety of the Works,
(b) hand over Contractor's Documents, Plant, Materials and other work, for which the Contractor has received payment, and
(c) remove all other Goods from the Site, except as necessary for safety, and leave the Site.

16.4 Payment on Termination

After a notice of termination under Sub-Clause 16.2 [*Termination by Contractor*] has taken effect, the Employer shall promptly:

(a) return the Performance Security to the Contractor,
(b) pay the Contractor in accordance with Sub-Clause 19.6 [*Optional Termination, Payment and Release*], and
(c) pay to the Contractor the amount of any loss of profit or other loss or damage sustained by the Contractor as a result of this termination.

17 Risk and Responsibility

17.1 Indemnities

The Contractor shall indemnify and hold harmless the Employer, the Employer's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

(a) bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and
(b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss:

(i) arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, and
(ii) is attributable to any negligence, wilful act or breach of the Contract by the Contractor, the Contractor's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

The Employer shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in sub-paragraphs (d)(i), (ii) and (iii) of Sub-Clause 18.3 [*Insurance Against Injury to Persons and Damage to Property*].

17.2

Contractor's Care of the Works

The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [*Taking Over of the Works and Sections*]) for the Works, when responsibility for the care of the Works shall pass to the Employer. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part of the Works, responsibility for the care of the Section or part shall then pass to the Employer.

After responsibility has accordingly passed to the Employer, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.

If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub Clause 17.3 [*Employer's Risks*], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.

The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking-Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

17.3

Employer's Risks

The risks referred to in Sub-Clause 17.4 below are:

(a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,

(b) rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war, within the Country,

(c) riot, commotion or disorder within the Country by persons other than the Contractor's Personnel and other employees of the Contractor and Subcontractors,

(d) munitions of war, explosive materials, ionising radiation or contamination by radio activity, within the Country, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity,

(e) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,

(f) use or occupation by the Employer of any part of the Permanent Works, except as may be specified in the Contract,

(g) design of any part of the Works by the Employer's Personnel or by others for whom the Employer is responsible, and

(h) any operation of the forces of nature which is Unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate preventative precautions.

17.4
Consequences of Employer's Risks

If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Engineer and shall rectify this loss or damage to the extent required by the Engineer.

If the Contractor suffers delay and/or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*], and
(b) payment of any such Cost, which shall be included in the Contract Price. In the case of sub-paragraphs (f) and (g) of Sub-Clause 17.3 [*Employer's Risks*], reasonable profit on the Cost shall also be included.

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

17.5
Intellectual and Industrial Property Rights

In this Sub-Clause, "infringement" means an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and "claim" means a claim (or proceedings pursuing a claim) alleging an infringement.

Whenever a Party does not give notice to the other Party of any claim within 28 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.

The Employer shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:

(a) an unavoidable result of the Contractor's compliance with the Contract, or
(b) a result of any Works being used by the Employer:

  (i) for a purpose other than that indicated by, or reasonably to be inferred from, the Contract, or
  (ii) in conjunction with any thing not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.

The Contractor shall indemnify and hold the Employer harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.

If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.

17.6
Limitation of Liability

Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with the Contract, other than under

Sub-Clause 16.4 [*Payment on Termination*] and Sub-Clause 17.1 [*Indemnities*].

The total liability of the Contractor to the Employer, under or in connection with the Contract other than under Sub-Clause 4.19 [*Electricity, Water and Gas*], Sub-Clause 4.20 [*Employer's Equipment and Free-Issue Material*], Sub-Clause 17.1 [*Indemnities*] and Sub-Clause 17.5 [*Intellectual and Industrial Property Rights*], shall not exceed the sum stated in the Particular Conditions or (if a sum is not so stated) the Accepted Contract Amount.

This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

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18 Insurance

18.1 General Requirements for Insurances

In this Clause, "insuring Party" means, for each type of insurance, the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.

Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms approved by the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

Wherever the Employer is the insuring Party, each insurance shall be effected with insurers and in terms consistent with the details annexed to the Particular Conditions.

If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Employer shall act for Employer's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.

The relevant insuring Party shall, within the respective periods stated in the Appendix to Tender (calculated from the Commencement Date), submit to the other Party:

(a) evidence that the insurances described in this Clause have been effected, and
(b) copies of the policies for the insurances described in Sub-Clause 18.2 [*Insurance for Works and Contractor's Equipment*] and Sub-Clause 18.3 [*Insurance against Injury to Persons and Damage to Property*].

When each premium is paid, the insuring Party shall submit evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.

Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes

to the execution of the Works and ensure that insurance is maintained in accordance with this Cause.

Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or attempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.

If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contract, or fails to provide satisfactory evidence and copies of policies in accordance with this Sub-Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay the amount of these premiums to the other Party, and the Contract Price shall be adjusted accordingly.

Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Employer, under the other terms of the Contract or otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Employer in accordance with these obligations, liabilities or responsibilities. However, if the insuring Party fails to effect and keep in force an insurance which is available and which it is required to effect and maintain under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.

Payments by one Party to the other Party shall be subject to Sub-Clause 2.5 [*Employer's Claims*] or Sub-Clause 20.1 [*Contractor's Claims*], as applicable.

18.2 Insurance for Works and Contractor's Equipment

The insuring Party shall insure the Works, Plant, Materials and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the date by which the evidence is to be submitted under sub-paragraph (a) of Sub-Clause 18.1 [*General Requirements for Insurances*], until the date of issue of the Taking-Over Certificate for the Works.

The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [*Defects Liability*]).

The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

Unless otherwise stated in the Particular Conditions, insurances under this Sub-Clause:

(a) shall be effected and maintained by the Contractor as insuring Party,
(b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated between the Parties for the sole purpose of rectifying the loss or damage,
shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [*Employer's Risks*],

(d) shall also cover loss or damage to a part of the Works which is attributable to the use or occupation by the Employer of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 17.3 [*Employer's Risks*], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated in the Appendix to Tender (if an amount is not so stated, this sub-paragraph (d) shall not apply), and

(e) may however exclude loss of, damage to, and reinstatement of:

(i) a part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below),

(ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship,

(iii) a part of the Works which has been taken over by the Employer, except to the extent that the Contractor is liable for the loss or damage, and

(iv) Goods while they are not in the Country, subject to Sub-Clause 14.5 [*Plant and Materials intended for the Works*].

If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Employer, with supporting particulars. The Employer shall then (i) be entitled subject to Sub-Clause 2.5 [*Employer's Claims*] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [*General Requirements for Insurances*].

18.3

Insurance against Injury to Persons and Damage to Property

The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [*Insurance for Works and Contractor's Equipment*]) or to any person (except persons insured under Sub-Clause 18.4 [*Insurance for Contractor's Personnel*]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

This insurance shall be for a limit per occurrence of not less than the amount stated in the Appendix to Tender, with no limit on the number of occurrences. If an amount is not stated in the Appendix to Tender, this Sub-Clause shall not apply.

Unless otherwise stated in the Particular Conditions, the insurances specified in this Sub-Clause:

(a) shall be effected and maintained by the Contractor as insuring Party,

(b) shall be in the joint names of the Parties,

(c) shall be extended to cover liability for all loss and damage to the Employer's property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract, and

(d) may however exclude liability to the extent that it arises from:

(i) the Employer's right to have the Permanent Works executed on, over, under, in or through any land, and to occupy this land for the Permanent Works,

(ii) damage which is an unavoidable result of the Contractor's obligations to execute the Works and remedy any defects, and

(iii) a cause listed in Sub-Clause 17.3 [*Employer's Risks*], except to the extent that cover is available at commercially reasonable terms.

18.4
Insurance for Contractor's Personnel

The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.

The Employer and the Engineer shall also be indemnified under the policy of insurance, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

19 Force Majeure

19.1
Definition of Force Majeure

In this Clause, "Force Majeure" means an exceptional event or circumstance:

(a) which is beyond a Party's control,
(b) which such Party could not reasonably have provided against before entering into the Contract,
(c) which, having arisen, such Party could not reasonably have avoided or overcome, and
(d) which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

(i) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
(ii) rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war,
(iii) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel and other employees of the Contractor and Sub-contractors,
(iv) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and
(v) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

19.2
Notice of Force Majeure

If a Party is or will be prevented from performing any of its obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.

The Party shall, having given notice, be excused performance of such obligations for so long as such Force Majeure prevents it from performing them.

Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

19.3

Duty to Minimise Delay

Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure.

A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

19.4

Consequences of Force Majeure

If the Contractor is prevented from performing any of his obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [*Notice of Force Majeure*], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

(a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*], and

(b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [*Definition of Force Majeure*] and, in the case of sub-paragraphs (ii) to (iv), occurs in the Country, payment of any such Cost.

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

19.5

Force Majeure Affecting Subcontractor

If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.

19.6

Optional Termination, Payment and Release

If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 19.2 [*Notice of Force Majeure*], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [*Cessation of Work and Removal of Contractor's Equipment*].

Upon such termination, the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include:

(a) the amounts payable for any work carried out for which a price is stated in the Contract;

(b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;

any other Cost or liability which in the circumstances was reasonably incurred by the Contractor in the expectation of completing the Works;

(d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and

(e) the Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.

19.7
Release from Performance under the Law

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

(a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and

(b) the sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [*Optional Termination, Payment and Release*] if the Contract had been terminated under Sub-Clause 19.6.

20 Claim, Disputes and Arbitration

20.1
Contractor's Claims

If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.

If the Contractor fails to give notice of a claim within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.

The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer. Without admitting the Employer's liability, the Engineer may, after receiving any notice under this Sub-Clause, monitor the record-keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Engineer to inspect all these records, and shall (if instructed) submit copies to the Engineer.

Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Engineer a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

(a) this fully detailed claim shall be considered as interim;

(b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Engineer may reasonably require; and

(c) the Contractor shall send a final claim within 28 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer.

Within 42 days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within such time.

Each Payment Certificate shall include such amounts for any claim as have 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.

The Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [*Extension of Time for Completion*], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause.

20.2 **Appointment of the Dispute Adjudication Board**

Disputes shall be adjudicated by a DAB in accordance with Sub-Clause 20.4 [*Obtaining Dispute Adjudication Board's Decision*]. The Parties shall jointly appoint a DAB by the date stated in the Appendix to Tender.

The DAB shall comprise, as stated in the Appendix to Tender, either one or three suitably qualified persons ("the members"). If the number is not so stated and the Parties do not agree otherwise, the DAB shall comprise three persons.

If the DAB is to comprise three persons, each Party shall nominate one member for the approval of the other Party. The Parties shall consult both these members and shall agree upon the third member, who shall be appointed to act as chairman.

However, if a list of potential members is included in the Contract, the members shall be selected from those on the list, other than anyone who is unable or unwilling to accept appointment to the DAB.

The agreement between the Parties and either the sole member ("adjudicator") or each of the three members shall incorporate by reference the General Conditions of Dispute Adjudication Agreement contained in the Appendix to these General Conditions, with such amendments as are agreed between them.

The terms of the remuneration of either the sole member or each of the three members, including the remuneration of any expert whom the DAB consults, shall be

allowances for the effect of any use of the Works by the Employer on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.

9.2 Delayed Tests

If the Tests on Completion are being unduly delayed by the Employer, Sub-Clause 7.4 [*Testing*] (fifth paragraph) and/or Sub-Clause 10.3 [*Interference with Tests on Completion*] shall be applicable.

If the Tests on Completion are being unduly delayed by the Contractor, the Engineer may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the Tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Engineer.

If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Employer's Personnel may proceed with the Tests at the risk and cost of the Contractor. The Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.

9.3 Retesting

If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 [*Rejection*] shall apply, and the Engineer or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

9.4 Failure to Pass Tests on Completion

If the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [*Retesting*], the Engineer shall be entitled to:

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

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

10 Employer's Taking Over

10.1 Taking Over of the Works and Sections

Except as stated in Sub-Clause 9.4 [*Failure to Pass Tests on Completion*], the Works shall be taken over by the Employer when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 8.2 [*Time for Completion*] and except as allowed in sub paragraph (a) below, and (ii) a

Taking-Over Certificate for the Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.

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

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

(a) issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or

(b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.

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

10.2 Taking Over of Parts of the Works

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

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

(a) the part which is used shall be deemed to have been taken over as from the date on which it is used,

(b) the Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Employer, and

(c) if requested by the Contractor, the Engineer shall issue a Taking-Over Certificate for this part.

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

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

mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

If at any time the Parties so agree, they may jointly refer a matter to the DAB for it to give its opinion. Neither Party shall consult the DAB on any matter without the agreement of the other Party.

If at any time the Parties so agree, they may appoint a suitably qualified person or persons to replace (or to be available to replace) any one or more members of the DAB. Unless the Parties agree otherwise, the appointment will come into effect if a member declines to act or is unable to act as a result of death, disability, resignation or termination of appointment.

If any of these circumstances occurs and no such replacement is available, a replacement shall be appointed in the same manner as the replaced person was required to have been nominated or agreed upon, as described in this Sub-Clause.

The appointment of any member may be terminated by mutual agreement of both Parties, but not by the Employer or the Contractor acting alone. Unless otherwise agreed by both Parties, the appointment of the DAB (including each member) shall expire when the discharge referred to in Sub-Clause 14.12 [*Discharge*] shall have become effective.

20.3

Failure to Agree Dispute Adjudication Board

If any of the following conditions apply, namely:

(a) the Parties fail to agree upon the appointment of the sole member of the DAB by the date stated in the first paragraph of Sub-Clause 20.2, [*Appointment of the Dispute Adjudication Board*]
(b) either Party fails to nominate a member (for approval by the other Party) of a DAB of three persons by such date,
(c) the Parties fail to agree upon the appointment of the third member (to act as chairman) of the DAB by such date, or
(d) the Parties fail to agree upon the appointment of a replacement person within 42 days after the date on which the sole member or one of the three members declines to act or is unable to act as a result of death, disability, resignation or termination of appointment,

then the appointing entity or official named in the Appendix to Tender shall, upon the request of either or both of the Parties and after due consultation with both Parties, appoint this member of the DAB. This appointment shall be final and conclusive. Each Party shall be responsible for paying one-half of the remuneration of the appointing entity or official.

20.4

Obtaining Dispute Adjudication Board's Decision

If a dispute (of any kind whatsoever) arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works, including any dispute as to any certificate, determination, instruction, opinion or valuation of the Engineer, either Party may refer the dispute in writing to the DAB for its decision, with copies to the other Party and the Engineer. Such reference shall state that it is given under this Sub-Clause.

For a DAB of three persons, the DAB shall be deemed to have received such reference on the date when it is received by the chairman of the DAB.

Both Parties shall promptly make available to the DAB all such additional information,

further access to the Site, and appropriate facilities, as the DAB may require for the purposes of making a decision on such dispute. The DAB shall be deemed to be not acting as arbitrator(s).

Within 84 days after receiving such reference, or within such other period as may be proposed by the DAB and approved by both Parties, the DAB shall give its decision, which shall be reasoned and shall state that it is given under this Sub-Clause. The decision shall be binding on both Parties, who shall promptly give effect to it unless and until it shall be revised in an amicable settlement or an arbitral award as described below. Unless the Contract has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the Works in accordance with the Contract.

If either Party is dissatisfied with the DAB's decision, then either Party may, within 28 days after receiving the decision, give notice to the other Party of its dissatisfaction. If the DAB fails to give its decision within the period of 84 days (or as otherwise approved) after receiving such reference, then either Party may, within 28 days after this period has expired, give notice to the other Party of its dissatisfaction.

In either event, this notice of dissatisfaction shall state that it is given under this Sub-Clause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Except as stated in Sub-Clause 20.7 [*Failure to Comply with Dispute Adjudication Board's Decision*] and Sub-Clause 20.8 [*Expiry of Dispute Adjudication Board's Appointment*], neither Party shall be entitled to commence arbitration of a dispute unless a notice of dissatisfaction has been given in accordance with this Sub-Clause.

If the DAB has given its decision as to a matter in dispute to both Parties, and no notice of dissatisfaction has been given by either Party within 28 days after it received the DAB's decision, then the decision shall become final and binding upon both Parties.

20.5 Amicable Settlement

Where notice of dissatisfaction has been given under Sub-Clause 20.4 above, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, arbitration may be commenced on or after the fifty-sixth day after the day on which notice of dissatisfaction was given, even if no attempt at amicable settlement has been made.

20.6 Arbitration

Unless settled amicably, any dispute in respect of which the DAB's decision (if any) has not become final and binding shall be finally settled by international arbitration. Unless otherwise agreed by both Parties:

(a) the dispute shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce,
(b) the dispute shall be settled by three arbitrators appointed in accordance with these Rules, and
(c) the arbitration shall be conducted in the language for communications defined in Sub-Clause 1.4 [*Law and Language*].

The arbitrator(s) shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, and any decision of the DAB, relevant to the dispute. Nothing shall disqualify the Engineer from being called as a witness and giving evidence before the arbitrator(s) on any matter whatsoever relevant to the dispute.

Neither Party shall be limited in the proceedings before the arbitrator(s) to the evidence or arguments previously put before the DAB to obtain its decision, or to the reasons

for dissatisfaction given in its notice of dissatisfaction. Any decision of the DAB shall be admissible in evidence in the arbitration.

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

20.7

Failure to Comply with Dispute Adjudication Board's Decision

In the event that:

(a) neither Party has given notice of dissatisfaction within the period stated in Sub-Clause 20.4 [*Obtaining Dispute Adjudication Board's Decision*],
(b) the DAB's related decision (if any) has become final and binding, and
(c) a Party fails to comply with this decision,

then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under Sub-Clause 20.6 [*Arbitration*]. Sub-Clause 20.4 [*Obtaining Dispute Adjudication Board's Decision*] and Sub-Clause 20.5 [*Amicable Settlement*] shall not apply to this reference.

20.8

Expiry of Dispute Adjudication Board's Appointment

If a dispute arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works and there is no DAB in place, whether by reason of the expiry of the DAB's appointment or otherwise:

(a) Sub-Clause 20.4 [*Obtaining Dispute Adjudication Board's Decision*] and Sub-Clause 20.5 [*Amicable Settlement*] shall not apply, and
(b) the dispute may be referred directly to arbitration under Sub-Clause 20.6 [*Arbitration*].

APPENDIX

General Conditions of Dispute Adjudication Agreement

1
Definitions

Each "Dispute Adjudication Agreement" is a tripartite agreement by and between:

(a) the "Employer";

(b) the "Contractor"; and

(c) the "Member" who is defined in the Dispute Adjudication Agreement as being:

(i) the sole member of the "DAB" (or "adjudicator") and, where this is the case, all references to the "Other Members" do not apply, or

(ii) one of the three persons who are jointly called the "DAB" (or "dispute adjudication board") and, where this is the case, the other two persons are called the "Other Members".

The Employer and the Contractor have entered (or intend to enter) into a contract, which is called the "Contract" and is defined in the Dispute Adjudication Agreement, which incorporates this Appendix. In the Dispute Adjudication Agreement, words and expressions which are not otherwise defined shall have the meanings assigned to them in the Contract.

2
General Provisions

Unless otherwise stated in the Dispute Adjudication Agreement, it shall take effect on the latest of the following dates:

(a) the Commencement Date defined in the Contract,

(b) when the Employer, the Contractor and the Member have each signed the Dispute Adjudication Agreement, or

(c) when the Employer, the Contractor and each of the Other Members (if any) have respectively each signed a dispute adjudication agreement.

When the Dispute Adjudication Agreement has taken effect, the Employer and the Contractor shall each give notice to the Member accordingly. If the Member does not receive either notice within six months after entering into the Dispute Adjudication Agreement, it shall be void and ineffective.

This employment of the Member is a personal appointment. At any time, the Member may give not less than 70 days' notice of resignation to the Employer and to the Contractor, and the Dispute Adjudication Agreement shall terminate upon the expiry of this period.

No assignment or subcontracting of the Dispute Adjudication Agreement is permitted without the prior written agreement of all the parties to it and of the Other Members (if any).

3
Warranties

The Member warrants and agrees that he/she is and shall be impartial and independent of the Employer, the Contractor and the Engineer. The Member shall promptly disclose, to each of them and to the Other Members (if any), any fact or circumstance which might appear inconsistent with his/her warranty and agreement of impartiality and independence.

When appointing the Member, the Employer and the Contractor relied upon the Member's representations that he/she is:

(a) experienced in the work which the Contractor is to carry out under the Contract,

(b) experienced in the interpretation of contract documentation, and

(c) fluent in the language for communications defined in the Contract.

4
General Obligations of the Member

The Member shall:

(a) have no interest financial or otherwise in the Employer, the Contractor or the Engineer, nor any financial interest in the Contract except for payment under the Dispute Adjudication Agreement;

(b) not previously have been employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except in such circumstances as were disclosed in writing to the Employer and the Contractor before they signed the Dispute Adjudication Agreement;

(c) have disclosed in writing to the Employer, the Contractor and the Other Members (if any), before entering into the Dispute Adjudication Agreement and to his/her best knowledge and recollection, any professional or personal relationships with any director, officer or employee of the Employer, the Contractor or the Engineer, and any previous involvement in the overall project of which the Contract forms part;

(d) not, for the duration of the Dispute Adjudication Agreement, be employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except as may be agreed in writing by the Employer, the Contractor and the Other Members (if any);

(e) comply with the annexed procedural rules and with Sub-Clause 20.4 of the Conditions of Contract;

(f) not give advice to the Employer, the Contractor, the Employer's Personnel or the Contractor's Personnel concerning the conduct of the Contract, other than in accordance with the annexed procedural rules;

(g) not while a Member enter into discussions or make any agreement with the Employer, the Contractor or the Engineer regarding employment by any of them, whether as a consultant or otherwise, after ceasing to act under the Dispute Adjudication Agreement;

(h) ensure his/her availability for all site visits and hearings as are necessary;

(i) become conversant with the Contract and with the progress of the Works (and of any other parts of the project of which the Contract forms part) by studying all documents received which shall be maintained in a current working file;

(j) treat the details of the Contract and all the DAB's activities and hearings as private and confidential, and not publish or disclose them without the prior written consent of the Employer, the Contractor and the Other Members (if any); and

(k) be available to give advice and opinions, on any matter relevant to the Contract when requested by both the Employer and the Contractor, subject to the agreement of the Other Members (if any).

5
General Obligations of the Employer and the Contractor

The Employer, the Contractor, the Employer's Personnel and the Contractor's Personnel shall not request advice from or consultation with the Member regarding the Contract, otherwise than in the normal course of the DAB's activities under the Contract and the Dispute Adjudication Agreement, and except to the extent that prior agreement is given by the Employer, the Contractor and the Other Members (if any). The Employer and the Contractor shall be responsible for compliance with this provision, by the Employer's Personnel and the Contractor's Personnel respectively.

The Employer and the Contractor undertake to each other and to the Member that the Member shall not, except as otherwise agreed in writing by the Employer, the Contractor, the Member and the Other Members (if any):

(a) be appointed as an arbitrator in any arbitration under the Contract;

(b) be called as a witness to give evidence concerning any dispute before arbitrator(s) appointed for any arbitration under the Contract; or

(c) be liable for any claims for anything done or omitted in the discharge or purported discharge of the Member's functions, unless the act or omission is shown to have been in bad faith.

The Employer and the Contractor hereby jointly and severally indemnify and hold the Member harmless against and from claims from which he is relieved from liability under the preceding paragraph.

Whenever the Employer or the Contractor refers a dispute to the DAB under Sub-Clause 20.4 of the Conditions of Contract, which will require the Member to make a site visit and attend a hearing, the Employer or the Contractor shall provide appropriate security for a sum equivalent to the reasonable expenses to be incurred by the Member. No account shall be taken of any other payments due or paid to the Member.

6

Payment

The Member shall be paid as follows, in the currency named in the Dispute Adjudication Agreement:

(a) a retainer fee per calendar month, which shall be considered as payment in full for:
  (i) being available on 28 days' notice for all site visits and hearings;
  (ii) becoming and remaining conversant with all project developments and maintaining relevant files;
  (iii) all office and overhead expenses including secretarial services, photocopying and office supplies incurred in connection with his duties; and
  (iv) all services performed hereunder except those referred to in sub-paragraphs (b) and (c) of this Clause.

The retainer fee shall be paid with effect from the last day of the calendar month in which the Dispute Adjudication Agreement becomes effective; until the last day of the calendar month in which the Taking-Over Certificate is issued for the whole of the Works.

With effect from the first day of the calendar month following the month in which Taking-Over Certificate is issued for the whole of the Works, the retainer fee shall be reduced by 50%. This reduced fee shall be paid until the first day of the calendar month in which the Member resigns or the Dispute Adjudication Agreement is otherwise terminated.

(b) a daily fee which shall be considered as payment in full for:
  (i) each day or part of a day up to a maximum of two days' travel time in each direction for the journey between the Member's home and the site, or another location of a meeting with the Other Members (if any);
  (ii) each working day on site visits, hearings or preparing decisions; and
  (iii) each day spent reading submissions in preparation for a hearing.

(c) all reasonable expenses incurred in connection with the Member's duties, including the cost of telephone calls, courier charges, faxes and telexes, travel expenses, hotel and subsistence costs: a receipt shall be required for each item in excess of five percent of the daily fee referred to in sub-paragraph (b) of this Clause;

(d) any taxes properly levied in the Country on payments made to the Member (unless a national or permanent resident of the Country) under this Clause 6.

The retainer and daily fees shall be as specified in the Dispute Adjudication Agreement. Unless it specifies otherwise, these fees shall remain fixed for the first 24 calendar months, and shall thereafter be adjusted by agreement between the Employer, the Contractor and the Member, at each anniversary of the date on which the Disoute Adjudication Agreement became effective.

The Member shall submit invoices for payment of the monthly retainer and air fares quarterly in advance. Invoices for other expenses and for daily fees shall be submitted following the conclusion of a site visit or hearing. All invoices shall be accompanied by a brief description of activities performed during the relevant period and shall be addressed to the Contractor.

The Contractor shall pay each of the Member's invoices in full within 56 calendar days after receiving each invoice and shall apply to the Employer (in the Statements under the Contract) for reimbursement of one-half of the amounts of these invoices. The Employer shall then pay the Contractor in accordance with the Contract.

If the Contractor fails to pay to the Member the amount to which he/she is entitled under the Dispute Adjudication Agreement, the Employer shall pay the amount due to the Member and any other amount which may be required to maintain the operation of the DAB; and without prejudice to the Employer's rights or remedies. In addition to all other rights arising from this default, the Employer shall be entitled to reimbursement of all sums paid in excess of one-half of these payments, plus all costs of recovering these sums and financing charges calculated at the rate specified in Sub-Clause 14.8 of the Conditions of Contract.

If the Member does not receive payment of the amount due within 70 days after submitting a valid invoice, the Member may (i) suspend his/her services (without notice) until the payment is received, and/or (ii) resign his/her appointment by giving notice under Clause 7.

7

Termination

At any time: (i) the Employer and the Contractor may jointly terminate the Dispute Adjudication Agreement by giving 42 days' notice to the Member; or (ii) the Member may resign as provided for in Clause 2.

If the Member fails to comply with the Dispute Adjudication Agreement, the Employer and the Contractor may, without prejudice to their other rights, terminate it by notice to the Member. The notice shall take effect when received by the Member.

If the Employer or the Contractor fails to comply with the Dispute Adjudication Agreement, the Member may, without prejudice to his other rights, terminate it by notice to the Employer and the Contractor. The notice shall take effect when received by them both.

Any such notice, resignation and termination shall be final and binding on the Employer, the Contractor and the Member. However, a notice by the Employer or the Contractor, but not by both, shall be of no effect.

8

Default of the Member

If the Member fails to comply with any obligation under Clause 4, he/she shall not be entitled to any fees or expenses hereunder and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses received by the Member and the Other Members (if any), for proceedings or decisions (if any) of the DAB which are rendered void or ineffective.

9

Disputes

Any dispute or claim arising out of or in connection with this Dispute Adjudication Agreement, or the breach, termination or invalidity thereof, shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with these Rules of Arbitration.

Annex PROCEDURAL RULES

1 Unless otherwise agreed by the Employer and the Contractor, the DAB shall visit the site at intervals of not more than 140 days, including times of critical construction events, at the request of either the Employer or the Contractor. Unless otherwise agreed by the Employer, the Contractor and the DAB, the period between consecutive visits shall not be less than 70 days, except as required to convene a hearing as described below.

2 The timing of and agenda for each site visit shall be as agreed jointly by the DAB, the Employer and the Contractor, or in the absence of agreement, shall be decided by the DAB. The purpose of site visits is to enable the DAB to become and remain acquainted with the progress of the Works and of any actual or potential problems or claims.

3 Site visits shall be attended by the Employer, the Contractor and the Engineer and shall be co-ordinated by the Employer in co-operation with the Contractor. The Employer shall ensure the provision of appropriate conference facilities and secretarial and copying services. At the conclusion of each site visit and before leaving the site, the DAB shall prepare a report on its activities during the visit and shall send copies to the Employer and the Contractor.

4 The Employer and the Contractor shall furnish to the DAB one copy of all documents which the DAB may request, including Contract documents, progress reports, variation instructions, certificates and other documents pertinent to the performance of the Contract. All communications between the DAB and the Employer or the Contractor shall be copied to the other Party. If the DAB comprises three persons, the Employer and the Contractor shall send copies of these requested documents and these communications to each of these persons.

5 If any dispute is referred to the DAB in accordance with Sub-Clause 20.4 of the Conditions of Contract, the DAB shall proceed in accordance with Sub-Clause 20.4 and these Rules. Subject to the time allowed to give notice of a decision and other relevant factors, the DAB shall:

(a) act fairly and impartially as between the Employer and the Contractor, giving each of them a reasonable opportunity of putting his case and responding to the other's case, and

(b) adopt procedures suitable to the dispute, avoiding unnecessary delay or expense.

6 The DAB may conduct a hearing on the dispute, in which event it will decide on the date and place for the hearing and may request that written documentation and arguments from the Employer and the Contractor be presented to it prior to or at the hearing.

7 Except as otherwise agreed in writing by the Employer and the Contractor, the DAB shall have power to adopt an inquisitorial procedure, to refuse admission to hearings or audience at hearings to any persons other than representatives of the Employer, the Contractor and the Engineer, and to proceed in the absence of any party who the DAB is satisfied received notice of the hearing; but shall have discretion to decide whether and to what extent this power may be exercised.

8 The Employer and the Contractor empower the DAB, among other things, to:

(a) establish the procedure to be applied in deciding a dispute,
(b) decide upon the DAB's own jurisdiction, and as to the scope of any dispute referred to it,
(c) conduct any hearing as it thinks fit, not being bound by any rules or procedures other than those contained in the Contract and these Rules,
(d) take the initiative in ascertaining the facts and matters required for a decision,
(e) make use of its own specialist knowledge, if any,
(f) decide upon the payment of financing charges in accordance with the Contract,
(g) decide upon any provisional relief such as interim or conservatory measures, and
(h) open up, review and revise any certificate, decision, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute.

9 The DAB shall not express any opinions during any hearing concerning the merits of any arguments advanced by the Parties. Thereafter, the DAB shall make and give its decision in accordance with Sub-Clause 20.4, or as otherwise agreed by the Employer and the Contractor in writing. If the DAB comprises three persons:

(a) it shall convene in private after a hearing, in order to have discussions and prepare its decision;
(b) it shall endeavour to reach a unanimous decision: if this proves impossible the applicable decision shall be made by a majority of the Members, who may require the minority Member to prepare a written report for submission to the Employer and the Contractor; and
(c) if a Member fails to attend a meeting or hearing, or to fulfil any required function, the other two Members may nevertheless proceed to make a decision, unless:
  (i) either the Employer or the Contractor does not agree that they do so, or
  (ii) the absent Member is the chairman and he/she instructs the other Members to not make a decision.

INDEX OF SUB-CLAUSES

Bill No. 01 : General and Preliminary Items

AXIM

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 28,005	$ 28,005
1.02	Insurance of the Works	LS	1	$ 186,387	$ 186,387
1.03	Third-Party Insurance	LS	1	$ 46,597	$ 46,597
1.04	Advance Payment Guarantee	LS	1	$ 37,277	$ 37,277
1.05	Retention Money Guarantee	LS	1	$ 4,660	$ 4,660
	Temporary facilities and equipment.				
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 265,920	$ 265,920
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	24	$ 2,305	$ 55,311
1.13	Provide and equip Contractor's offices	LS	1	$ 489,293	$ 489,293
1.14	Maintenance Contractor's offices during execution, including services	Mth	24	$ 3,191	$ 76,585
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 35,456	$ 35,456
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 70,173	$ 70,173
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	24	$ 2,393	$ 57,439
	Mobilization, preparation works & Demobilization				
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 978,900	$ 978,900
1.22	Preparation / maintenance Access roads	LS	1	$ 69,730	$ 69,730
1.23	Site clearance	LS	1	$ 86,465	$ 86,465
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 10,000	$ 10,000
1.25	Demolition of houses	LS	1	$ 69,730	$ 69,730
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 267,764	$ 267,764
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	$ 5,000
				SUM total works (US$)	**$ 2,840,694**

Bill No. 02 : Surveys and Investigations

AXIM

Item No	Description	Contract Values and Quantities Unit	Qty	Unit Rate US$	Amount US$
2.00	**Pre-construction surveys**				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 81,696	$ 163,392
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 19,946	$ 19,946
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 7,433	$ 7,433
2.10	**Pre- and Post-construction soil investigations**				
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	5	$ 35,214	$ 176,069
2.12	Post-construction: Boreholes for backfill quaywall	no	10	$ 7,978	$ 79,780
2.13	Soil investigations reclamation (CPT's)	no	13	$ 3,989	$ 51,857
2.14	Soil investigations reclamation (boreholes)	no	3	$ 7,978	$ 23,934
2.15	Laboratory soil tests	LS	1	$ 79,780	$ 79,780
2.20	**Post-construction surveys (after completion of the reclamation, slope protections and breakwater)**				
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 81,696	$ 81,696
2.22	Topographic post-survey the total project area	LS	1	$ 7,117	$ 7,117
			SUM total works (US$)		$ 691,005

Bill No. 03 : Maritime; Breakwater and Slope Protections AXIM

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Breakwater (Sea-end, behind quay wall part)				
3.02	General (wet) excavation and dredging	m^3	3,000	$ 51.08	$ 153,247
3.11	Quarry Run, 0-40 kg	ton	4,950	$ 90.59	$ 448,427
3.12	Rock, 10-60 kg	ton	2,570	$ 90.59	$ 232,820
3.13	Rock, 60-300 kg	ton	3,330	$ 90.59	$ 301,669
3.14	Rock, 300-1000 kg	ton	0	$ 93.73	$ -
3.15	Rock, 1000-3000 kg	ton	0	$ 98.45	$ -
3.16	Rock, 2000-5000 kg	ton	6,490	$ 98.45	$ 638,971
3.17	Rock, 3000-6000 kg	ton	0	$ 98.45	$ -
3.21	Geotextile	m^2	0	$ 15.24	$ -
	Slope Protection Quay Wall/ west side				
3.02	General (wet) excavation and dredging	m^3	1,600	$ 51.08	$ 81,732
3.11	Quarry Run, 0-40 kg	ton	7,880	$ 90.59	$ 713,860
3.12	Rock, 10-60 kg	ton	1,840	$ 90.59	$ 166,688
3.13	Rock, 60-300 kg	ton	2,490	$ 90.59	$ 225,573
3.14	Rock, 300-1000 kg	ton	0	$ 93.73	$ -
3.15	Rock, 1000-3000 kg	ton	1,770	$ 98.45	$ 174,265
3.16	Rock, 2000-5000 kg	ton	3,150	$ 98.45	$ 310,133
3.17	Rock, 3000-6000 kg	ton	0	$ 98.45	$ -
3.21	Geotextile	m^2	0	$ 15.24	$ -
	Slope Protection Port Area Western Part				
3.01	General (dry) Excavation	m^3	5,200	$ 29.96	$ 155,795
3.02	General (wet) excavation and dredging	m^3	1,286	$ 51.08	$ 65,680
3.11	Quarry Run, 0-40 kg	ton	20,000	$ 90.59	$ 1,811,828
3.12	Rock, 10-60 kg	ton	8,000	$ 90.59	$ 724,731
3.13	Rock, 60-300 kg	ton	7,000	$ 90.59	$ 634,140
3.14	Rock, 300-1000 kg	ton	4,440	$ 93.73	$ 416,171
3.15	Rock, 1000-3000 kg	ton	10,320	$ 98.45	$ 1,016,053
3.16	Rock, 2000-5000 kg	ton	0	$ 98.45	$ -
3.21	Geotextile	m^2	2,800	$ 15.24	$ 42,669
	Slope Protection Port Area Eastern Part (near net storage)				
3.02	General (wet) excavation and dredging	m^3	300	$ 51.08	$ 15,325
				$ -	
3.11	Quarry Run, 0-40 kg	ton	360	$ 90.59	$ 32,613
3.12	Rock, 10-60 kg	ton	310	$ 90.59	$ 28,083
3.13	Rock, 60-300 kg	ton	260	$ 90.59	$ 23,554
3.21	Geotextile	m^2	120	$ 15.24	$ 1,829
				SUM total works (US$)	$ 8,415,857

Bill No. 04 : Maritime; Quay Walls

AXIM

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Northern Quay Wall (4x18x4m)				
4.02	General (wet) excavation and drodging	m^3	850	$ 51.06	$ 43,398
4.10	Supply, Place Foundation Fill, (Processed Q.R.)	ton	950	$ 119.93	$ 113,934
4.12	Supply, Place crushed stone for foundation 40-70 mm	ton	470	$ 124.89	$ 58,700
4.13	Supply, Place Back fill (behind blockwall)	ton	1,560	$ 95.11	$ 148,373
4.14	Supply, Place Bed protection: Rock, 10-60 kg	ton	260	$ 119.93	$ 31,182
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	80	$ 15.23	$ 1,219
4.31	Blocks in quay wall, including corner	m^3	916	$ 1,525.35	$ 1,397,600
4.41	corner	m^3	75	$ 1,038.34	$ 77,356
	Southern Quay Wall (3x18x5m; 2x18x6m)				
4.02	General (wet) excavation and dredging	m^3	1,200	$ 51.06	$ 61,268
				$ -	
4.10	Supply, Place Foundation Fill, (Processed Q.R.)	ton	1,310	$ 119.93	$ 157,108
4.12	Supply, Place crushed stone for foundation 40-70 mm	ton	690	$ 124.89	$ 86,177
4.13	Supply, Place Back fill (behind blockwall)	ton	3,180	$ 95.11	$ 302,452
4.14	Supply, Place Bed protection: Rock, 10-60 kg	ton	330	$ 119.93	$ 39,577
4.15	Supply, Place crushed stone for crown wall foundation (40-70mm)	ton	44	$ 124.89	$ 5,540
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	100	$ 15.23	$ 1,523
4.31	Blocks in quay wall	m^3	1,669	$ 1,419.06	$ 2,368,413
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	88	$ 1,038.34	$ 91,374
4.51	R.C. Crown wall; 3.5x0.5x90m (incl. reinf. 135 kg/m^3, dilatation joints ctc 18m, c	m^3	158	$ 1,184.90	$ 187,215
	Entire Quay Wall				
4.81	reinforcement)	No	21	$ 6,275.62	$ 131,788
4.82	Fenders	m	0	$ 2,025.96	$ -
4.83	Berthing rings	No	60	$ 1,267.55	$ 76,053
				SUM total works (US$)	$ 5,380,249

Bill No. 05 : Earth works

AXIM

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	General excavation and dredging				
3.01	General (dry) excavation (excl. Rock Blasting)	m^3	0	$ 29.93	$ -
3.02	General (wet) excavation and dredging (excl. Rock Blasting)	m^3	5,000	$ 51.03	$ 255,155
3.02	Dredgin of port basin and approach channel (excl. Rock Blasting)	m^3	7,500	$ 51.03	$ 382,732
5.10	Reclamation and fill				
5.11	General fill to (except structural fill for buildings and roads)	m^3	51,800	$ 50.94	$ 2,638,816
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1:1)	m^3	0	$ 54.63	$ -
5.13	Structural fill for roads/pavement (1m thick+ incl. shoulder width 1.5m)	m^3	6,200	$ 54.63	$ 338,730
5.20	Rock excavation				
5.21	Rock excavation wet	m^3	1,500	$ 125.51	$ 188,265
5.22	Rock excavation dry	m^3	0	$ 66.26	$ -
			SUM total works (US$)		$ 3,803,698

Bill No. 06 : Roads, Pavements and Fencing

AXIM

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.10	**Concrete Paving (CP) carriage ways and parking areas**				
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	1,050	$ 102.50	$ 107,622
6.30	**Stelcon Sheets (SS)**				
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	418	$ 59.06	$ 24,665
3.21	Geotextile (between sand base and sub-grade)	m^2	1,792	$ 10.98	$ 19,673
6.32	Stelcon sheets (2000x2000x200mm)	m^2	1,392	$ 282.25	$ 392,893
6.40	**Kerbs**				
6.43	Kerb type 3 (150x150x1000mm), concrete C28/35	m	90	$ 30.85	$ 2,776
6.80	**Fencing**				
6.81	Fence, 2.5m high (including poles, terminations, etc.)	m	280	$ 661.07	$ 185,100
6.82	Gates	LS	3	$ 17,080.45	$ 51,241
				SUM total works (US$)	$ 783,970

Bill No. 07 : Buildings - Main

AXIM

Item No	Description	Contract Values and Quantities Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.01	Provisional sum Small Administration Office	L.S.	1	195,000.00	195,000.00
	Fish Market				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rinsing water collection and discharge				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.03	Provisional sum Fish Market	L.S.	1	121,500.00	121,500.00
	Net Mending Shed (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.05	Provisional sum Large Net Mending Shed	L.S.	1	481,950.00	481,950.00
	Ice Making Plant (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	All building related structures covered by an insulated roof structure				
	Doors, required insulating doors, windows, glazing, insulated glazing, architectural finishes, etc.				
	All required mechanical and electrical equipments for the plant and the building including the slides for the ice blocks. The installations need to be such that the plant can deliver as a mean production 15 tons of ice a day of the dimensions of 1x0.25x0.25m				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Plumbed installation for water distribution				
	Air-conditioning				
	Waste water collection and discharge				
	Parking and loading area				
7.09	Provisional sum Large Ice Making Plant	L.S.	1	593,750.00	593,750.00

	Workshop (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.11	**Provisional sum Large Workshop**	L.S.	1	94,687.50	94,687.50
	Daycare Centre				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and beams covered by a roof structure with all related elements such as guttering				
	Aluminium roof structure				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Exterior walled playground with small structures with the related facilities and utilities				
7.15	**Provisional sum Daycare Centre**	L.S.	1	193,750.00	193,750.00
	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.17	**Provisional sum Small Toilet Block**	L.S.	1	51,560.00	51,560.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	1,752,697.50

Bill No. 08 : Utility Works - Fresh water supply

AXIM

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	740	$ 126.76	$ 93,802
				SUM total works (US$)	$ 93,802

Bill No. 09 : Utility Works - Power supply and ligthing system

AXIM

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	Power supply - lines				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m^3/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	560	$ 399.41	$ 223,669
				SUM total works (US$)	$ 223,669

Bill No. 10 : Utility works - Stormwater collection and sewage system **AXIM**

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.4	**Crossing culvert**				
10.41	R.C. Crossing culvert, 2x 2.0x1.5m (reinforcement 130 kg/ m^3)	m^3	70	$ 1,326.14	$ 92,830
10.41	R.C. Outlet 2x 2.0x1.5m (reinforcement 130 kg/ m3)	m^3	40	$ 1,361.50	$ 54,460
10.7	**Sewage system - pipes and inspection pits**				
10.71	Pipe ∅160mm (PVC), from anticipated location of septic tank to outlet/collectio	m	150	$ 114.53	$ 17,179
10.72	Inspection pit	no	4	$ 8,188.57	$ 32,754
		SUM total works (US$)			$ 197,223

Bill No. 12 : Day-Works Schedule

AXIM

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	400	$4.85	1942
12.02	Foreman	hour	120	$8.50	1020
12.03	Steel bender / fixer	hour	40	$12.42	497
12.04	Concreter	hour	40	$12.42	497
12.05	Workshop mechanic	hour	80	$12.42	994
12.06	Heavy equipment mechanic	hour	40	$12.42	497
12.07	Welder	hour	40	$12.42	497
12.08	Watchman	hour	40	$6.20	248
12.09	Marine surveyor	hour	40	$13.60	544
12.10	Topographical surveyor	hour	40	$12.42	497
12.11	Diver including equipment	hour	40	$27.81	1112
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	80	$110.68	8854
12.22	Bulldozer, ~350hp	hour	40	$138.35	5534
12.23	Excavator ~2m^3	hour	80	$225.89	18071
12.24	Excavator ~4m^3	hour	40	$338.82	13553
12.25	Wheel loader ~4m^3	hour	80	$225.89	18071
12.26	Dump truck ~8 ton	hour	80	$76.10	6088
12.27	Shovel wheel loader ~2m^3	hour	40	$155.97	6239
12.28	Tractor with scraper ~7m^3	hour	80	$165.58	13247
12.29	Motor grader ~100hp	hour	80	$110.67	8854
12.30	Welding equipment	hour	40	$27.68	1107
12.31	Concrete mixer ~500ltr	hour	80	$105.65	8452
12.32	Concrete mixer truck ~3m^3	hour	40	$95.21	3808
12.33	Crawler crane	hour	40	$537.60	21504
12.34	Tower crane	hour	40	$470.40	18816
12.35	Barge	hour	80	$657.22	52577
12.36	Self-propelled barge	hour	40	$834.62	33385
12.37	Tug boat	hour	20	$938.11	18762
12.38	Hydrographic survey launch	hour	40	$486.53	19461
12.39	Backhoe dregder (incl. barge)	hour	40	$1,300.99	52040
12.40	Crane barge	hour	40	$1,685.38	67415
12.41	Pontoon	hour	40	$138.39	5536
12.42	Road Roller 8 Ton	hour	80	$80.88	6470
12.43	Grinding Machine	hour	80	$68.86	5508
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
				SUM total works (US$)	$ 421,696.08

Bill No. 100 : SUMMARY

AXIM

Contract		Amount US$
Bill No. 01 : General and Preliminary Items	$	2,840,694
Bill No. 02 : Surveys and Investigations	$	691,005
Bill No. 03 : Maritime; Breakwater and Slope Protections	$	8,415,857
Bill No. 04 : Maritime; Quay Walls	$	5,380,249
Bill No. 05 : Earth works	$	3,803,698
Bill No. 06 : Roads, Pavements and Fencing	$	783,970
Bill No. 07: Building	$	1,752,698
Bill No. 08 : Utility Works - Fresh water supply	$	93,802
Bill No. 09 : Utility Works - Power supply and ligthing system	$	223,669
Bill No. 10 : Utility works - Stormwater collection and sewage syste	$	197,223
Bill No. 12 : Day-Works Schedule	$	421,696
Provisional sum (contingencies)	$	500,000
Total	$	**25,104,561**

Bill No. 01 : General and Preliminary Items

DIXCOVE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 17,068.44	17,068
1.02	Insurance of the Works	LS	1	$ 113,789.58	113,790
1.03	Third-Party Insurance	LS	1	$ 28,447.40	28,447
1.04	Advance Payment Guarantee	LS	1	$ 22,757.91	22,758
1.05	Retention Money Guarantee	LS	1	$ 2,844.74	2,845
	Temporary facilities and equipment.				
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 265,786.38	265,786
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	14	$ 2,303.48	32,249
1.13	Provide and equip Contractor's offices	LS	1	$ 489,046.94	489,047
1.14	Maintenance Contractor's offices during execution, including services	Mth	14	$ 3,189.44	44,652
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 35,438.18	35,438
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 70,138.07	70,138
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	14	$ 2,392.08	33,489
	Mobilization & Demobilization				
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 940,839	940,839
1.22	Preparation / maintenance Access roads	LS	1	$ 209,085	209,085
1.23	Site clearance	LS	1	$ 86,422	86,422
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 5,000	5,000
1.25	Demolition of houses	LS	1	$ 69,695	69,695
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 267,629	267,629
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5,000
				SUM total works (US$)	**$ 2,739,378**

Bill No. 02 : Surveys and Investigations

DIXCOVE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
2.00	Pre-construction surveys				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 22,111	$ 44,223
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 19,738	$ 19,738
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 2,181	$ 2,181
2.10	Pre- and Post-construction soil investigations				
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	2	$ 34,848	$ 69,695
2.12	Post-construction: Boreholes for backfill quaywall	no	3	$ 7,895	$ 23,685
2.13	Soil investigations reclamation (CPT's)	no	5	$ 3,948	$ 19,738
2.14	Soil investigations reclamation (boreholes)	no	2	$ 7,895	$ 15,790
2.15	Laboratory soil tests	LS	1	$ 39,475	$ 39,475
2.20	Post-construction surveys (after completion of the reclamation, slope protections and breakwater)				
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 22,111	$ 22,111
2.22	Topographic post-survey the total project area	LS	1	$ 2,181	$ 2,181
			SUM total works (US$)		$ 258,818

Bill No. 03 : Maritime; Breakwater and Slope Protections

DIXCOVE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Breakwater (Sea-end, behind quay wall part)				
3.02	General (wet) excavation and dredging	m^3	5,000	$ 51.03	255,155
				$ -	
3.11	Quarry Run, 0-40 kg	ton	9,050	$ 90.50	819,027
3.12	Rock, 10-60 kg	ton	4,280	$ 90.50	387,341
3.13	Rock, 60-300 kg	ton	5,640	$ 90.50	510,421
3.15	Rock, 1000-3000 kg	ton	4,900	$ 98.36	481,943
3.16	Rock, 2000-5000 kg	ton	4,870	$ 98.36	478,992
	Slope Protection Port Area West Part				
3.02	General (wet) excavation and dredging	m^3	1,500	$ 51.03	76,546
3.11	Quarry Run, 0-40 kg	ton	7,200	$ 90.50	651,602
3.12	Rock, 10-60 kg	ton	2,530	$ 90.50	228,966
3.14	Rock, 300-1000 kg	ton	4,500	$ 47.34	213,028
3.21	Geotextile	m^2	660	$ 15.22	10,048
	Small breakwater west (30m length)				
3.02	General (wet) excavation and dredging	m^3	100	$ 51.03	5,103
3.11	Quarry Run, 0-40 kg	ton	1,270	$ 90.50	114,935
3.12	Rock, 10-60 kg	ton	620	$ 90.50	56,110
3.14	Rock, 300-1000 kg	ton	1,070	$ 93.64	100,193
	Small breakwater east (30m length)				
3.02	General (wet) excavation and dredging	m^3	100	$ 51.03	5,103
3.11	Quarry Run, 0-40 kg	ton	1,270	$ 90.50	114,935
3.12	Rock, 10-60 kg	ton	620	$ 90.50	56,110
3.14	Rock, 300-1000 kg	ton	1,070	$ 93.64	100,193
	Large Breakwater South (150m length)				
3.02	General (wet) excavation and dredging	m^3	11,500	$ 51.03	586,856
3.11	Quarry Run, 0-40 kg	ton	4,270	$ 90.50	386,436
3.12	Rock, 10-60 kg	ton	3,170	$ 90.50	286,886
3.13	Rock, 60-300 kg	ton	3,990	$ 90.50	361,096
3.14	Rock, 300-1000 kg	ton	2,630	$ 93.64	246,268
3.15	Rock, 1000-3000 kg	ton	4,110	$ 98.36	404,242
3.16	Rock, 2000-5000 kg	ton	2,220	$ 98.36	218,350
			SUM total works (US$)		$ 7,155,886

Bill No. 04 : Maritime; Quay Walls

DIXCOVE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Quay Wall (2x18x5m)				
4.02	General (wet) excavation and dredging	m^3	290	$ 51.03	14,799
4.11	Quarry Run, 0-40 kg	ton	480	$ 119.87	57,537
4.12	Crushed stone for foundation 40-70 mm	ton	240	$ 124.83	29,959
4.13	Back fill (behind blockwall)	ton	980	$ 95.06	93,162
4.14	Bed protection: Rock, 10-60 kg	ton	130	$ 119.87	15,583
4.15	Supply, Place crushed stone for crown wall foundation (40-70mm)	ton	18	$ 124.83	2,215
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	200	$ 15.22	3,045
4.31	Blocks in quay wall	m^3	806	$ 1,524.58	1,228,812
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m3, dilatation joints ctc 18m, etc.)	m^3	51	$ 1,037.81	52,929
4.51	R.C. Crown wall; 3.5x0.5x36m (incl. reinf. 135 kg/m^3, dilatation joints ctc 18m, etc.	m^3	63	$ 1,184.31	74,611
4.81	Bollards, 10 ton (including per bollard: embedded anchors and 50kg reinforcement)	No	6	$ 6,272.46	37,635
4.82	Fenders	m	0	$ 2,024.95	0
4.83	Berthing rings	No	18	$ 1,266.92	22,804
		SUM total works (US$)			1,633,091

Bill No. 05 : Earth works

DIXCOVE

Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
			Contract Values and Quantities		
	Specific Items				
5.00	General excavation and dredging				
3.01	General (dry) excavation (excl. Rock Blasting)	m^3	0	$ 29.93	-
3.02	Dredgin of port basin and approach channel (excl. Rock Blasting)	m^3	4,500	$ 51.03	229,639
5.10	Reclamation and fill				
5.11	General fill (except structural fill for buildings and roads)	m^3	10,633	$ 50.94	541,670
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1.1)	m^3	0	$ 54.63	-
5.13	Structural fill for roads/pavement (1m thick)	m^3	2,500	$ 54.63	136,585
5.14	Landing beach	m^3	8,300	$ 50.94	422,822
5.20	Rock excavation				
5.21	Rock excavation wet	m^3	2,240	$ 125.51	281,143
5.22	Rock excavation dry	m^3	100	$ 66.26	6,626
			SUM total works (US$)		1,618,485

Bill No. 06 : Roads, Pavements and Fencing

DIXCOVE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.10	Concrete Paving (CP) carriage ways and parking areas				
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	500	$ 102.50	51,249
6.30	Stelcon Sheets (SS)				
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	108	$ 59.06	6,379
3.21	Geotextile (between sand base and sub-grade)	m^2	488	$ 10.98	5,357
6.32	Stelcon sheets (2000x2000x200mm)	m^2	360	$ 282.25	101,610
6.40	Kerbs				
6.43	Kerb type 3 (150x150x1000mm), concrete C28/35	m	36	$ 30.85	1,110
				-	
		SUM total works (US$)			165,706

Bill No. 07 : Buildings - Main DIXCOVE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.02	**Provisional sum Small Administration Office**	L.S.	1	195,000.00	195,000.00
	Net Mending Shed (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.06	**Provisional sum Small Net Mending Shed**	L.S.	1	202,650.00	202,650.00
	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.18	**Provisional sum Small Toilet Block**	L.S.	1	51,560.00	51,560.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	469,710.00

Bill No. 08 : Utility Works - Fresh water supply

DIXCOVE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	230	$ 126.76	29,155
				SUM total works (US$)	29,155

Bill No. 09 : Utility Works - Power supply and ligthing system

DIXCOVE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	Power supply - lines				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m³/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	290	$ 446.84	129,585
				SUM total works (US$)	129,585

Bill No. 10 : Utility works - Stormwater collection and sewage system **DIXCOVE**

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.7	Sewage system - pipes and inspection pits				
10.71	Pipe ∅160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	25	$ 114.53	2,863
10.72	Inspection pit	no	1	$ 8,188.57	8,189
	SUM total works (US$)				11,052

Bill No. 12 : Day-Works Schedule

DIXCOVE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	200	$4.85	971
12.02	Foreman	hour	60	$8.50	510
12.03	Steel bender / fixer	hour	20	$12.42	248
12.04	Concreter	hour	20	$12.42	248
12.05	Workshop mechanic	hour	40	$12.42	497
12.06	Heavy equipment mechanic	hour	20	$12.42	248
12.07	Welder	hour	20	$12.42	248
12.08	Watchman	hour	20	$6.20	124
12.09	Marine surveyor	hour	20	$13.60	272
12.10	Topographical surveyor	hour	20	$12.42	248
12.11	Diver including equipment	hour	20	$27.81	556
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	40	$110.68	4,427
12.22	Bulldozer, ~350hp	hour	20	$138.35	2,767
12.23	Excavator ~2m^3	hour	40	$225.89	9,036
12.24	Excavator ~4m^3	hour	20	$338.82	6,776
12.25	Wheel loader ~4m^3	hour	40	$225.89	9,036
12.26	Dump truck ~8 ton	hour	40	$76.10	3,044
12.27	Shovel wheel loader ~2m^3	hour	20	$155.97	3,119
12.28	Tractor with scraper ~7m^3	hour	40	$165.58	6,623
12.29	Motor grader ~100hp	hour	40	$110.67	4,427
12.30	Welding equipment	hour	20	$27.68	554
12.31	Concrete mixer ~500ltr	hour	40	$105.65	4,226
12.32	Concrete mixer truck ~3m^3	hour	20	$95.21	1,904
12.33	Crawler crane	hour	20	$537.60	10,752
12.34	Tower crane	hour	20	$470.40	9,408
12.35	Barge	hour	40	$657.22	26,289
12.36	Self-propelled barge	hour	20	$834.62	16,692
12.37	Tug boat	hour	10	$938.11	9,381
12.38	Hydrographic survey launch	hour	20	$486.53	9,731
12.39	Backhoe dregder (incl. barge)	hour	20	$1,300.99	26,020
12.40	Crane barge	hour	20	$1,685.38	33,708
12.41	Pontoon	hour	20	$138.39	2,768
12.42	Road Roller 8 Ton	hour	40	$80.88	3,235
12.43	Grinding Machine	hour	40	$68.86	2,754
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
		SUM total works (US$)			210,848

Bill No. 100 : SUMMARY

DIXCOVE

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	2,739,378
Bill No. 02 : Surveys and Investigations	258,818
Bill No. 03 : Maritime; Breakwater and Slope Protections	7,155,886
Bill No. 04 : Maritime; Quay Walls	1,633,091
Bill No. 05 : Earth works	1,618,485
Bill No. 06 : Roads, Pavements and Fencing	165,706
Bill No. 07: Building	469,710
Bill No. 08 : Utility Works - Fresh water supply	29,155
Bill No. 09 : Utility Works - Power supply and ligthing system	129,585
Bill No. 10 : Utility works - Stormwater collection and sewage system	11,052
Bill No. 12 : Day-Works Schedule	210,848
Provisional sum (contingencies)	250,000
Total	$ 14,671,714

Bill No. 01 : General and Preliminary Items

ELMINA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 18,973	18,973
1.02	Insurance of the Works	LS	1	$ 126,484	126,484
1.03	Third-Party Insurance	LS	1	$ 31,621	31,621
1.04	Advance Payment Guarantee	LS	1	$ 25,297	25,297
1.05	Retention Money Guarantee	LS	1	$ 3,162	3,162
	Temporary facilities and equipment.				
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 265,786	265,786
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	24	$ 2,303	55,284
1.13	Provide and equip Contractor's offices	LS	1	$ 489,047	489,047
1.14	Maintenance Contractor's offices during execution, including services	Mth	24	$ 3,189	76,546
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 35,438	35,438
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 70,138	70,138
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	24	$ 2,392	57,410
	Mobilization & Demobilization				
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 996,874	996,874
1.22	Preparation / maintenance Access roads	LS	1	$ 83,634	83,634
1.23	Site clearance	LS	1	$ 172,844	172,844
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 10,000	10,000
1.25	Demolition of houses	LS	1	$ 94,502	94,502
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 226,804	226,804
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5,000
		SUM total works (US$)			**2,844,844**

Bill No. 02 : Surveys and Investigations — ELMINA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
2.00	**Pre-construction surveys**				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 7,607	15,213
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 19,738	19,738
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 7,356	7,356
2.10	**Pre- and Post-construction soil investigations**				
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	7	$ 34,848	243,933
2.12	Post-construction: Boreholes for backfill quaywall	no	11	$ 7,895	86,846
2.13	Soil investigations reclamation (CPT's)	no	22	$ 3,948	86,846
2.14	Soil investigations reclamation (boreholes)	no	5	$ 7,895	39,475
2.15	Laboratory soil tests	LS	1	$ 110,531	110,531
2.20	**Post-construction surveys (after completion of the reclamation, slope protections and breakwater)**				
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 7,607	7,607
2.22	Topographic post-survey the total project area	LS	1	$ 7,356	7,356
	SUM total works (US$)				624,899

Bill No. 04 : Maritime; Quay Walls

ELMINA

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Northern Quay Wall (1x18x4m; 2x18x5m; 2x18x6m)				
4.02	General (wet) excavation and dredging	m^3	1,080	$ 51.03	55,113
4.11	Quarry Run, 0-40 kg	ton	1,940	$ 119.87	232,547
4.12	Crushed stone for foundation 40-70 mm	ton	620	$ 124.83	77,395
4.13	Back fill (behind blockwall)	ton	2,510	$ 95.06	238,608
4.14	Bed protection: Rock, 10-60 kg	ton	350	$ 119.87	41,954
4.14	Bed protection: Rock, 10-60 kg; small revetment to support quay	ton	150	$ 119.87	17,980
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	100	$ 15.22	1,522
4.31	Blocks in quay wall	m^3	1,694	$ 1,524.58	2,581,877
4.32	Blocks in quay wall, extended corner	m^3	198	$ 1,524.58	301,867
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	118	$ 1,037.81	122,177
4.81	Bollards, 10 ton (including per bollard: embedded anchors and 50kg reinforcement)	No	12	$ 6,272.46	75,270
4.82	Fenders	m	283	$ 2,024.95	573,059
4.83	Berthing rings	No	36	$ 1,266.92	45,609
	Southern Quay Wall (6x18x4m)				
4.02	General (wet) excavation and dredging	m^3	1,188	$ 51.03	60,625
4.11	Quarry Run, 0-40 kg	ton	1,770	$ 119.87	212,169
4.12	Crushed stone for foundation 40-70 mm	ton	710	$ 124.83	88,630
4.13	Back fill (behind blockwall)	ton	1,860	$ 95.06	176,817
4.14	Bed protection: Rock, 10-60 kg	ton	400	$ 119.87	47,948
4.31	Blocks in quay wall	m^3	1,379	$ 1,418.35	1,955,191
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	300	$ 1,037.81	311,085
4.81	Bollards, 10 ton (including per bollard: embedded anchors and 50kg reinforcement)	No	14	$ 6,272.46	87,814
4.82	Fenders	m	0	$ 2,024.95	-
4.83	Berthing rings	No	42	$ 1,266.92	53,210
		SUM total works (US$)			7,358,469

Bill No. 05 : Earth works

ELMINA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	General excavation and dredging				
3.01	General (dry) excavation (excl. Rock Blasting)	m^3	500	$ 29.93	14,965
3.02	General (wet) excavation and dredging (excl. Rock Blasting)	m^3	500	$ 51.03	25,515
3.02	Dredgin of port basin and approach channels (excl. Rock Blasting)	m^3	6,000	$ 51.03	306,186
5.10	Reclamation and fill				
5.11	General fill (except structural fill for buildings and roads)	m^3	17,000	$ 50.94	866,021
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, s'ope 1:1)	m^3	0	$ 54.63	
5.13	Structural fill for roads/pavement (1m thick+ incl. shoulder width 1.5m)	m^3	15,400	$ 54.63	841,362
5.20	Rock excavation				
5.21	Rock excavation wet	m^3	100	$ 125.51	12,551
5.22	Rock excavation dry	m^3	100	$ 66.26	6,626
		SUM total works (US$)			2,073,226

Bill No. 06 : Roads, Pavements and Fencing — ELMINA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.00	Asphalt roads (AP)				
6.01	Natural gravel sub-base (thickness = 200mm)	m^2	240	$ 20.65	4,955
6.10	Concrete Paving (CP) carriage ways and parking areas				
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	2,830	$ 103.22	292,113
6.30	Stelcon Sheets (SS)				
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	356	$ 59.48	21,199
3.21	Geotextile (between sand base and sub-grade)	m^2	1,616	$ 11.06	17,866
6.32	Stelcon sheets (2000x2000x200mm)	m^2	1,188	$ 284.24	337,677
6.80	Fencing				
6.81	Fence, 2.5m high (including poles, terminations, etc.)	m	530	$ 665.73	352,837
6.82	Gates	LS	4	$ 17,200.86	68,803
				SUM total works (US$)	1,095,451

Bill No. 07 : Buildings - Main ELMINA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.01	**Provisional sum small Administration Office**	L.S.	1	195,000.00	195,000.00
	Fish Market				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rinsing water collection and discharge				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.03	**Provisional sum Fish Market**	L.S.	1	121,500.00	121,500.00
	Net Mending Shed (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.05	**Provisional sum Small Net Mending Shed**	L.S.	2	202,650.00	405,300.00

	Ice Making Plant (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	All building related structures covered by an insulated roof structure				
	Doors, required insulating doors, windows, glazing, insulated glazing, architectural finishes, etc.				
	All required mechanical and electrical equipments for the plant and the building including the slides for the ice blocks. The installations need to be such that the plant can deliver as a mean production 15 tons of ice a day of the dimensions of 1x0.25x0.25m				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Plumbed installation for water distribution				
	Air-conditioning				
	Waste water collection and discharge				
	Parking and loading area				
7.09	**Provisional sum Large Ice Making Plant**	L.S.	1	593,750.00	593,750.00
	Workshop (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.11	**Provisional sum Large Workshop**	L.S	1	94,687.50	94,687.50
	Workshop (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.12	**Provisional sum Small Workshop**	L.S.	1	45,437.50	45,437.50
	Daycare Centre				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and beams covered by a roof structure with all related elements such as guttering				
	Aluminium roof structure				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Exterior walled playground with small structures with the related facilities and utilities				
7.15	**Provisional sum Daycare Centre**	L.S.	1	193,750.00	193,750.00

	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.17	**Provisional sum Small Toilet Block**	L.S.	2	51,560.00	103,120.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	1,773,045.00

Bill No. 08 : Utility Works - Fresh water supply

ELMINA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	1,070	$ 126.76	135,632.47
	Day works	Prov. Sum			
	SUM total works (US$)				135,632.47

Bill No. 09 : Utility Works - Power supply and ligthing system — ELMINA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	Power supply - lines				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m³/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	1,250	$ 536.60	670,749
	SUM total works (US$)				670,749

Bill No. 10 : Utility works - Stormwater collection and sewage system ELMINA

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.7	Sewage system - pipes and inspection pits				
10.71	Pipe ⌀160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	160	$ 114.53	18,325
10.72	Inspection pit	no	2	$ 8,188.57	16,377
				SUM total works (US$)	34,701.73

Bill No. 12 : Day-Works Schedule

ELMINA

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	400	$4.85	1942
12.02	Foreman	hour	120	$8.50	1020
12.03	Steel bender / fixer	hour	40	$12.42	497
12.04	Concreter	hour	40	$12.42	497
12.05	Workshop mechanic	hour	80	$12.42	994
12.06	Heavy equipment mechanic	hour	40	$12.42	497
12.07	Welder	hour	40	$12.42	497
12.08	Watchman	hour	40	$6.20	248
12.09	Marine surveyor	hour	40	$13.60	544
12.10	Topographical surveyor	hour	40	$12.42	497
12.11	Diver including equipment	hour	40	$27.81	1112
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	80	$110.68	8854
12.22	Bulldozer, ~350hp	hour	40	$138.35	5534
12.23	Excavator ~2m^3	hour	80	$225.89	18071
12.24	Excavator ~4m^3	hour	40	$338.82	13553
12.25	Wheel loader ~4m^3	hour	80	$225.89	18071
12.26	Dump truck ~8 ton	hour	80	$76.10	6088
12.27	Shovel wheel loader ~2m^3	hour	40	$155.97	6239
12.28	Tractor with scraper ~7m^3	hour	80	$165.58	13247
12.29	Motor grader ~100hp	hour	80	$110.67	8854
12.30	Welding equipment	hour	40	$27.68	1107
12.31	Concrete mixer ~500ltr	hour	80	$105.65	8452
12.32	Concrete mixer truck ~3m^3	hour	40	$95.21	3808
12.33	Crawler crane	hour	40	$537.60	21504
12.34	Tower crane	hour	40	$470.40	18816
12.35	Barge	hour	80	$657.22	52577
12.36	Self-propelled barge	hour	40	$834.62	33385
12.37	Tug boat	hour	20	$938.11	18762
12.38	Hydrographic survey launch	hour	40	$486.53	19461
12.39	Backhoe dregder (incl. barge)	hour	40	$1,300.99	52040
12.40	Crane barge	hour	40	$1,685.38	67415
12.41	Pontoon	hour	40	$138.39	5536
12.42	Road Roller 8 Ton	hour	80	$80.88	6470
12.43	Grinding Machine	hour	80	$68.86	5508
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
				SUM total works (US$)	421,696.08

Construction of Fishing Ports and Fish Landing Sites (LOT 1) Priced Bill of Quantities

Bill No. 100 : SUMMARY ELMINA

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	2,844,843.52
Bill No. 02 : Surveys and Investigations	624,898.83
Bill No. 04 : Maritime; Quay Walls	7,358,469.16
Bill No. 05 : Earth works	2,073,226.05
Bill No. 06 : Roads, Pavements and Fencing	1,095,450.55
Bill No. 07: Building	1,773,045.00
Bill No. 08 : Utility Works - Fresh water supply	135,632.47
Bill No. 09 : Utility Works - Power supply and ligthing system	670,748.53
Bill No. 10 : Utility works - Stormwater collection and sewage system	34,701.73
Bill No. 12 : Day-Works Schedule	421,696.08
Provisional sum (contingencies)	500,000.00
Total	**$17,532,711.91**

Bill No. 01 : General and Preliminary Items MOREE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 18,644	18644
1.02	Insurance of the Works	LS	1	$ 124,296	124296
1.03	Third-Party Insurance	LS	1	$ 31,074	31074
1.04	Advance Payment Guarantee	LS	1	$ 24,859	24859
1.05	Retention Money Guarantee	LS	1	$ 3,107	3107
	Temporary facilities and equipment.				
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 265,786	265786
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	24	$ 2,303	55284
1.13	Provide and equip Contractor's offices	LS	1	$ 489,047	489047
1.14	Maintenance Contractor's offices during execution, including services	Mth	24	$ 3,189	76546
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 35,438	35438
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 70,138	70138
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	24	$ 2,392	57410
	Mobilization & Demobilization				
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 946,783	946783
1.22	Preparation / maintenance Access roads	LS	1	$ 209,085	209085
1.23	Site clearance	LS	1	$ 21,605	21605
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 10,000	10000
1.25	Demolition of houses	LS	1	$ 111,512	111512
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 267,629	267629
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5000
				SUM total works (US$)	**2,823,245.30**

Bill No. 02 : Surveys and Investigations MOREE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
2.00	Pre-construction surveys				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 7,607	15,213
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 19,738	19,738
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 7,356	7,356
2.10	Pre- and Post-construction soil investigations				
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	3	$ 34,848	104,543
2.12	Post-construction: Boreholes for backfill quaywall	no	6	$ 7,895	47,370
2.13	Soil investigations reclamation (CPT's)	no	5	$ 3,948	19,738
2.14	Soil investigations reclamation (boreholes)	no	2	$ 7,895	15,790
2.15	Laboratory soil tests	LS	1	$ 51,318	51,318
2.20	Post-construction surveys (after completion of the reclamation, slope protections and breakwater)				
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 7,607	7,607
2.22	Topographic post-survey the total project area	LS	1	$ 7,356	7,356
		SUM total works (US$)			296,027.15

Bill No. 03 : Maritime; Breakwater and Slope Protections MOREE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Breakwater (Sea-end, behind quay wall part)				
3.02	General (wet) excavation and dredging	m^3	3,144	$ 51.03	160,441
3.11	Quarry Run, 0-40 kg	ton	6,800	$ 90.50	615,402
3.12	Rock, 10-60 kg	ton	3,350	$ 90.50	303,176
3.13	Rock, 60-300 kg	ton	1,500	$ 90.50	135,750
3.14	Rock, 300-1000 kg	ton	4,530	$ 93.19	422,140
3.16	Rock, 2000-5000 kg	ton	2,970	$ 98.36	292,117
3.17	Rock, 3000-6000 kg	ton	5,650	$ 98.36	555,710
	Little breakwater west of quaywalls				
3.02	General (wet) excavation and dredging	m^3	270	$ 51.03	13,778
3.11	Quarry Run, 0-40 kg	ton	530	$ 90.50	47,965
3.12	Rock, 10-60 kg	ton	300	$ 90.50	27,150
3.13	Rock, 60-300 kg	ton	330	$ 90.50	29,865
	Slope Protection Quay Wall/ South Side				
3.01	General (dry) Excavation	m^3		$ 29.93	-
3.02	General (wet) excavation and dredging	m^3	1,200	$ 51.03	61,237
3.11	Quarry Run, 0-40 kg	ton	10,170	$ 90.50	920,388
3.12	Rock, 10-60 kg	ton	2,590	$ 90.50	234,396
3.13	Rock, 60-300 kg	ton	3,400	$ 90.50	307,701
3.14	Rock, 300-1000 kg	ton	0	$ 93.64	-
3.15	Rock, 1000-3000 kg	ton	2,390	$ 98.36	235,070
3.16	Rock, 2000-5000 kg	ton	3,610	$ 98.36	355,064
3.17	Rock, 3000-6000 kg	ton	0	$ 98.36	-
	Boundary Breakwater (North side)				
3.02	General (wet) excavation and dredging	m^3	1,800	$ 51.03	91,856
3.11	Quarry Run, 0-40 kg	ton	1,260	$ 90.50	114,030
3.12	Rock, 10-60 kg	ton	1,160	$ 90.50	104,980
3.13	Rock, 60-300 kg	ton	470	$ 90.50	42,535
3.14	Rock, 300-1000 kg	ton	1,370	$ 93.64	128,284
3.31	Concrete blocks (stairs) (0,6x0,2x1,5m and 0,6x0,4x1,5m)	m^3	4	$ 1,019.96	4,080
	Beach Revetment				
3.02	General (wet) excavation and dredging	m^3	2,620	$ 51.03	133,701
3.11	Quarry Run, 0-40 kg	ton	2,730	$ 90.50	247,066
3.12	Rock, 10-60 kg	ton	2,300	$ 90.50	208,151
3.13	Rock, 60-300 kg	ton	1,940	$ 90.50	175,571
			SUM total works (US$)		5,967,603.83

Bill No. 04 : Maritime; Quay Walls

MOREE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Quay Wall (2x18x4m; 2x18x5m; 2x18x6m)				
4.02	General (wet) excavation and dredging	m^3	1,080	$ 51.03	55,113
4.11	Quarry Run, 0-40 kg	ton	1,540	$ 119.87	184,599
4.12	Crushed stone for foundation 40-70 mm	ton	760	$ 124.83	94,872
4.13	Back fill (behind blockwall)	ton	3,670	$ 95.06	348,881
4.14	Bed protection: Rock, 10-60 kg	ton	390	$ 119.87	46,749
4.15	Supply, Place crushed stone for crown wall foundation (40-70mm)	ton	53	$ 124.83	6,645
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	200	$ 15.22	3,045
4.31	Blocks in quay wall	m^3	1,890	$ 1,524.58	2,881,457
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	114	$ 1,037.81	118,051
4.51	R.C. Crown wall; 3.5x0.5x108m (incl. reinf. 135 kg/m^3, dilatation joints ctc 18m, etc.	m^3	189	$ 1,184.31	223,834
4.81	Bollards, 10 ton (including per bollard: embedded anchors and 50kg reinforcement)	No	14	$ 6,272.46	87,814
4.82	Fenders	m	0	$ 2,024.95	-
4.83	Berthing rings	No	42	$ 1,266.92	53,210
		SUM total works (US$)			4,104,271.27

Bill No. 05 : Earth works

MOREE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	General excavation and dredging				
3.01	General (dry) excavation (excl. Rock Blasting) (preparing flat areas for buildings)	m^3	800	$ 29.93	23,944
3.02	Dredging of port basin and approach channel (excl. Rock Blasting)	m^3	600	$ 51.03	30,619
5.10	Reclamation and fill				
5.11	General fill (except structural fill for buildings and roads)	m^3	9,000	$ 50.94	458,482
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1:1)	m^3	0	$ 54.63	
5.13	Structural fill for roads/pavement (1m thick+ incl. shoulder width 1.5m)	m^3	2,413	$ 54.63	131,832
5.20	Rock excavation				
5.21	Rock excavation wet	m^3	800	$ 125.51	100,408
5.22	Rock excavation dry	m^3	300	$ 66.26	19,879
		SUM total works (US$)			765,162.81

Bill No. 06 : Roads, Pavements and Fencing

MOREE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.10	Concrete Paving (CP) carriage ways and parking areas				
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	400	$ 102.50	40,999
6.30	Stelcon Sheets (SS)				
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	418	$ 59.06	24,665
3.21	Geotextile (between sand base and sub-grade)	m^2	1,792	$ 10.98	19,673
6.32	Stelcon sheets (2000x2000x200mm)	m^2	1,392	$ 282.25	392,893
6.40	Kerbs				
6.43	Kerb type 3 (150x150x1000mm), concrete C28/35	m	90	$ 30.85	2,776
	SUM total works (US$)				481,006.04

MOREE

Bill No. 07 : Buildings - Main

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.01	**Provisional sum Small Administration Office**	L.S.	1	195,000.00	195,000.00
	Fish Market				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rinsing water collection and discharge				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.03	**Provisional sum Fish Market**	L.S.	1	121,500.00	121,500.00
	Net Mending Shed (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.06	**Provisional sum Small Net Mending Shed**	L.S.	1	202,650.00	202,650.00

	Workshop (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.11	**Provisional sum Large Workshop**	L.S.	1	94,687.50	94,687.50
	Daycare Centre				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and beams covered by a roof structure with all related elements such as guttering				
	Aluminium roof structure				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Exterior walled playground with small structures with the related facilities and utilities				
7.15	**Provisional sum Daycare Centre**	L.S.	1	193,750.00	193,750.00
	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.17	**Provisional sum Small Toilet Block**	L.S.	1	51,156.00	51,156.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as por the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling. installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	879,243.50

Bill No. 08 : Utility Works - Fresh water supply

MOREE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	910	$ 126.76	115,351
				SUM total works (US$)	115,350.98

Bill No. 09 : Utility Works - Power supply and ligthing system

MOREE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	Power supply - lines				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m³/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	1,000	$ 465.22	465,223
		SUM total works (US$)			465,222.82

Bill No. 10 : Utility works - Stormwater collection and sewage system

MOREE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.7	Sewage system - pipes and inspection pits				
10.71	Pipe ⌀160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	320	$ 114.53	36,649
10.72	Inspection pit	no	6	$ 8,188.57	49,131
		SUM total works (US$)			85,780.60

Bill No. 12 : Day-Works Schedule MOREE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	200	$4.85	971
12.02	Foreman	hour	60	$8.50	510
12.03	Steel bender / fixer	hour	20	$12.42	248
12.04	Concreter	hour	20	$12.42	248
12.05	Workshop mechanic	hour	40	$12.42	497
12.06	Heavy equipment mechanic	hour	20	$12.42	248
12.07	Welder	hour	20	$12.42	248
12.08	Watchman	hour	20	$6.20	124
12.09	Marine surveyor	hour	20	$13.60	272
12.10	Topographical surveyor	hour	20	$12.42	248
12.11	Diver including equipment	hour	20	$27.81	556
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	40	$110.68	4,427
12.22	Bulldozer, ~350hp	hour	20	$138.35	2,767
12.23	Excavator ~2m^3	hour	40	$225.89	9,036
12.24	Excavator ~4m^3	hour	20	$338.82	6,776
12.25	Wheel loader ~4m^3	hour	40	$225.89	9,036
12.26	Dump truck ~8 ton	hour	40	$76.10	3,044
12.27	Shovel wheel loader ~2m^3	hour	20	$155.97	3,119
12.28	Tractor with scraper ~7m^3	hour	40	$165.58	6,623
12.29	Motor grader ~100hp	hour	40	$110.67	4,427
12.30	Welding equipment	hour	20	$27.68	554
12.31	Concrete mixer ~500ltr	hour	40	$105.65	4,226
12.32	Concrete mixer truck ~3m^3	hour	20	$95.21	1,904
12.33	Crawler crane	hour	20	$537.60	10,752
12.34	Tower crane	hour	20	$470.40	9,408
12.35	Barge	hour	40	$657.22	26,289
12.36	Self-propelled barge	hour	20	$834.62	16,692
12.37	Tug boat	hour	10	$938.11	9,381
12.38	Hydrographic survey launch	hour	20	$486.53	9,731
12.39	Backhoe dregder (incl. barge)	hour	20	$1,300.99	26,020
12.40	Crane barge	hour	20	$1,685.38	33,708
12.41	Pontoon	hour	20	$138.39	2,768
12.42	Road Roller 8 Ton	hour	40	$80.88	3,235
12.43	Grinding Machine	hour	40	$68.86	2,754
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
		SUM total works (US$)			210,848.04

Bill No. 100 : SUMMARY MOREE

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	2,823,245
Bill No. 02 : Surveys and Investigations	296,027
Bill No. 03 : Maritime; Breakwater and Slope Protections	5,967,604
Bill No. 04 : Maritime; Quay Walls	4,104,271
Bill No. 05 : Earth works	765,163
Bill No. 06 : Roads, Pavements and Fencing	481,006
Bill No. 07: Building	879,244
Bill No. 08 : Utility Works - Fresh water supply	115,351
Bill No. 09 : Utility Works - Power supply and ligthing system	465,223
Bill No. 10 : Utility works - Stormwater collection and sewage system	85,781
Bill No. 12 : Day-Works Schedule	210,848
Provisional sum (contingencies)	250,000
Total	**$ 16,443,762.33**

Bill No. 01 : General and Preliminary Items

MUMFORD

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 21,828	21,828
1.02	Insurance of the Works	LS	1	$ 145,522	145,522
1.03	Third-Party Insurance	LS	1	$ 36,381	36,381
1.04	Advance Payment Guarantee	LS	1	$ 29,104	29,104
1.05	Retention Money Guarantee	LS	1	$ 3,638	3,638
	Temporary facilities and equipment.				
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 265,786	265,786
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	24	$ 2,303	55,284
1.13	Provide and equip Contractor's offices	LS	1	$ 489,047	489,047
1.14	Maintenance Contractor's offices during execution, including services	Mth	24	$ 3,189	76,546
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 35,438	35,438
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 70,138	70,138
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	24	$ 2,392	57,410
	Mobilization & Demobilization				
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 946,783	946,783
1.22	Preparation / maintenance Access roads	LS	1	$ 111,512	111,512
1.23	Site clearance	LS	1	$ 43,211	43,211
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 5,000	5,000
1.25	Demolition of houses	LS	1	$ 41,817	41,817
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 267,629	267,629
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5,000
				SUM total works (US$)	**2,707,075.13**

Bill No. 02 : Surveys and Investigations

MUMFORD

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
2.00	**Pre-construction surveys**				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 18,125	36,250
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 19,738	19,738
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 3,030	3,030
2.10	Pre- and Post-construction soil investigations				
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	3	$ 34,848	104,543
2.12	Post-construction: Boreholes for backfill quaywall	no	6	$ 7,895	47,370
2.13	Soil investigations reclamation (CPT's)	no	7	$ 3,948	27,633
2.14	Soil investigations reclamation (boreholes)	no	2	$ 7,895	15,790
2.15	Laboratory soil tests	LS	1	$ 51,318	51,318
2.20	**Post-construction surveys (after completion of the reclamation, slope protections and breakwater)**				
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 18,125	18,125
2.22	Topographic post-survey the total project area	LS	1	$ 3,030	3,030
		SUM total works (US$)			**326,826.78**

Bill No. 03 : Maritime; Breakwater and Slope Protections

MUMFORD

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Breakwater (Sea-end, behind quay wall part)				
3.02	General (wet) excavation and dredging	m^3	2,130	$ 51.03	108,696
3.11	Quarry Run, 0-40 kg	ton	4,310	$ 90.50	390,056
3.12	Rock, 10-60 kg	ton	2,150	$ 90.50	194,576
3.13	Rock, 60-300 kg	ton	1,270	$ 90.50	114,935
3.14	Rock, 300-1000 kg	ton	2,360	$ 93.64	220,986
3.16	Rock, 2000-5000 kg	ton	2,480	$ 98.36	243,922
3.17	Rock, 3000-6000 kg	ton	2,700	$ 98.36	265,560
	Little breakwater west of quaywalls				
3.02	General (wet) excavation and dredging	m^3	150	$ 51.03	7,655
3.11	Quarry Run, 0-40 kg	ton	450	$ 90.50	40,725
3.12	Rock, 10-60 kg	ton	260	$ 90.50	23,530
3.13	Rock, 60-300 kg	ton	310	$ 90.50	28,055
	Slope Protection Quay Wall/ East Side				
3.02	General (wet) excavation and dredging	m^3	3,600	$ 51.03	183,712
3.11	Quarry Run, 0-40 kg	ton	17,980	$ 90.50	1,627,195
3.12	Rock, 10-60 kg	ton	4,590	$ 90.50	415,396
3.13	Rock, 60-300 kg	ton	6,140	$ 90.50	555,672
3.15	Rock, 1000-3000 kg	ton	1,310	$ 93.64	122,666
3.16	Rock, 2000-5000 kg	ton	11,470	$ 98.36	1,128,140
	Boundary Breakwater (North side)				
3.02	General (wet) excavation and dredging	m^3	840	$ 51.03	42,866
3.11	Quarry Run, 0-40 kg	ton	1,610	$ 90.50	145,705
3.12	Rock, 10-60 kg	ton	1,130	$ 90.50	102,265
3.13	Rock, 60-300 kg	ton	510	$ 90.50	46,155
3.14	Rock, 300-1000 kg	ton	1,390	$ 93.64	130,157
3.31	Concrete blocks (stairs) (0,6x0,2x1,5m and 0,6x0,4x1,5m)	m^3	4	$ 1,019.96	4,080
	Beach Revetment				
3.02	General (wet) excavation and dredging	m^3	3,000	$ 51.03	153,093
3.11	Quarry Run, 0-40 kg	ton	3,100	$ 90.50	280,551
3.12	Rock, 10-60 kg	ton	2,610	$ 90.50	236,206
3.13	Rock, 60-300 kg	ton	2,200	$ 90.50	199,101
		SUM total works (US$)			**7,011,655**

Bill No. 04 : Maritime; Quay Walls MUMFORD

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Northern Quay Wall (1x15x5m; 3x18x5m; 2x18x6m)				
4.02	General (wet) excavation and dredging	m^3	1,480	$ 51.03	75,526
4.11	Quarry Run, 0-40 kg	ton	1,550	$ 119.87	185,798
4.12	Crushed stone for foundation 40-70 mm	ton	760	$ 124.83	94,872
4.13	Back fill (behind blockwall)	ton	3,920	$ 95.06	372,647
4.14	Bed protection: Rock, 10-60 kg	ton	380	$ 119.87	45,550
4.15	Supply, Place crushed stone for crown wall foundation (40-70mm)	ton	52	$ 124.83	6,461
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	200	$ 15.22	3,045
4.31	Blocks in quay wall	m^3	2,040	$ 1,524.58	3,110,144
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	111	$ 1,037.81	114,938
4.51	R.C. Crown wall; 3.5x0.5x105m (incl. reinf. 135 kg/m^3, dilatation joints ctc 18m, etc.	m^3	184	$ 1,184.31	217,913
4.81	Bollards, 10 ton (including per bollard: embedded anchors and 50kg reinforcement)	No	13	$ 6,272.46	81,542
4.82	Fenders	m	330	$ 2,024.95	668,232
4.83	Berthing rings	No	41	$ 1,266.92	51,944
			SUM total works (US$)		5,028,609.40

Bill No. 05 : Earth works

MUMFORD

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	**General excavation and dredging**				
3.01	General (dry) excavation (excl. Rock Blasting)	m^3	1,000	$ 29.93	29,930
3.02	General (wet) excavation and dredging (excl. Rock Blasting)	m^3	0	$ 51.03	-
3.02	Dredgin of port basin and approach channel (excl. Rock Blasting)	m^3	1,000	$ 51.03	51,031
5.10	**Reclamation and fill**				
5.11	General fill port area (except structural fill for buildings and roads)	m^3	10,200	$ 50.94	519,612
5.11	General fill for asphalt road	m^3	5,200	$ 50.94	264,900
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1:1)	m^3	0	$ 54.63	
5.13	Structural fill for roads/pavement in port area (1m thick)	m^3	2,850	$ 54.63	155,707
5.13	Structural fill for asphalt road (1m thick+ incl. shoulder width 1.5m)	m^3	2,850	$ 54.63	155,707
5.20	**Rock excavation**				
5.21	Rock excavation wet	m^3	1,500	$ 125.51	188,265
5.22	Rock excavation dry	m^3	300	$ 66.26	19,879
			SUM total works (US$)		1,385,031.28

Bill No. 06 : Roads, Pavements and Fencing

MUMFORD

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.00	Asphalt roads (AP)				
6.01	Natural gravel sub-base (thickness = 200mm)	m^2	2,840	$ 21.00	59,640
6.10	Concrete Paving (CP) carriage ways and parking areas				
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	570	$ 102.50	58,424
6.30	Stelcon Sheets (SS)				
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	315	$ 59.06	18,605
3.21	Geotextile (between sand base and sub-grade)	m^2	1,316	$ 10.98	14,448
6.32	Stelcon sheets (2000x2000x200mm)	m^2	1,050	$ 282.25	296,363
6.40	Kerbs				
6.43	Kerb type 3 (150x150x1000mm). concrete C28/35	m	105	$ 30.85	3,239
			SUM total works (US$)		450,718.02

Bill No. 07 : Buildings - Main

MUMFORD

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.01	**Provisional sum Small Administration Office**	L.S.	1	195,000.00	195,000.00
	Fish Market				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rinsing water collection and discharge				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.03	**Provisional sum Fish Market**	L.S.	1	121,500.00	121,500.00
	Net Mending Shed (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.05	**Provisional sum Large Net Mending Shed**	L.S.	1	481,950.00	481,950.00
	Ice Making Plant (Large)				
	Doors, required insulating doors, windows, glazing, insulated glazing, architectural finishes, etc.				
	All required mechanical and electrical equipments for the plant and the building including the slides for the ice blocks. The installations need to be such that the plant can deliver as a mean production 15 tons of ice a day of the dimensions of 1x0.25x0.25m				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Plumbed installation for water distribution				
	Air-conditioning				
	Waste water collection and discharge				
	Parking and loading area				
7.09	**Provisional sum Large Ice Making Plant**	L.S.	1	593,750.00	593,750.00

	Workshop (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.11	**Provisional sum Large Workshop**	L.S.	1	94,687.50	**94,687.50**
	Daycare Centre				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and beams covered by a roof structure with all related elements such as guttering				
	Aluminium roof structure				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Exterior walled playground with small structures with the related facilities and utilities				
7.15	**Provisional sum Daycare Centre**	L.S.	1	193,750.00	**193,750.00**
	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.17	**Provisional sum Small Toilet Block**	L.S.	1	51,156.00	**51,156.00**
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	**20,500.00**
				SUM total works (US$)	**1,752,293.50**

Bill No. 08 : Utility Works - Fresh water supply

MUMFORD

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	630	$ 127.02	80,019
				SUM total works (US$)	80,019.48

Bill No. 09 : Utility Works - Power supply and ligthing system

MUMFORD

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	Power supply - lines				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m^3/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	610	$ 463.18	282,541
				SUM total works (US$)	282,540.65

Bill No. 10 : Utility works - Stormwater collection and sewage system

MUMFORD

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.4	**Crossing culvert**				
10.41	R.C. Crossing culvert, 1.0x1.0m ($1m^2$ flow area, reinforcement 140 kg/ m^3)	m^3	10	$ 1,328.81	13,288
10.7	**Sewage system - pipes and inspection pits**				
10.71	Pipe ∅160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	320	$ 114.76	36,723
10.72	Inspection pit	no	6	$ 8,205.09	49,231
				SUM total works (US$)	99,242

Bill No. 12 : Day-Works Schedule

MUMFORD

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	400	$4.85	1,942
12.02	Foreman	hour	120	$8.50	1,020
12.03	Steel bender / fixer	hour	40	$12.42	497
12.04	Concreter	hour	40	$12.42	497
12.05	Workshop mechanic	hour	80	$12.42	994
12.06	Heavy equipment mechanic	hour	40	$12.42	497
12.07	Welder	hour	40	$12.42	497
12.08	Watchman	hour	40	$6.20	248
12.09	Marine surveyor	hour	40	$13.60	544
12.10	Topographical surveyor	hour	40	$12.42	497
12.11	Diver including equipment	hour	40	$27.81	1,112
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	80	$110.68	8,854
12.22	Bulldozer, ~350hp	hour	40	$138.35	5,534
12.23	Excavator ~2m^3	hour	80	$225.89	18,071
12.24	Excavator ~4m^3	hour	40	$338.82	13,553
12.25	Wheel loader ~4m^3	hour	80	$225.89	18,071
12.26	Dump truck ~8 ton	hour	80	$76.10	6,088
12.27	Shovel wheel loader ~2m^3	hour	40	$155.97	6,239
12.28	Tractor with scraper ~7m^3	hour	80	$165.58	13,247
12.29	Motor grader ~100hp	hour	80	$110.67	8,854
12.30	Welding equipment	hour	40	$27.68	1,107
12.31	Concrete mixer ~500ltr	hour	80	$105.65	8,452
12.32	Concrete mixer truck ~3m^3	hour	40	$95.21	3,808
12.33	Crawler crane	hour	40	$537.60	21,504
12.34	Tower crane	hour	40	$470.40	18,816
12.35	Barge	hour	80	$657.22	52,577
12.36	Self-propelled barge	hour	40	$834.62	33,385
12.37	Tug boat	hour	20	$938.11	18,762
12.38	Hydrographic survey launch	hour	40	$486.53	19,461
12.39	Backhoe dregder (incl. barge)	hour	40	$1,300.99	52,040
12.40	Crane barge	hour	40	$1,685.38	67,415
12.41	Pontoon	hour	40	$138.39	5,536
12.42	Road Roller 8 Ton	hour	80	$80.88	6,470
12.43	Grinding Machine	hour	80	$68.86	5,508
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
				SUM total works (US$)	421,696

Construction of Fishing Ports and Fish Landing Sites (LOT 1)

Priced Bill of Quantities

Bill No. 100 : SUMMARY

MUMFORD

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	2,707,075
Bill No. 02 : Surveys and Investigations	326,827
Bill No. 03 : Maritime; Breakwater and Slope Protections	7,011,655
Bill No. 04 : Maritime; Quay Walls	5,028,609
Bill No. 05 : Earth works	1,385,031
Bill No. 06 : Roads, Pavements and Fencing	450,718
Bill No. 07: Building	1,752,294
Bill No. 08 : Utility Works - Fresh water supply	80,019
Bill No. 09 : Utility Works - Power supply and ligthing system	282,541
Bill No. 10 : Utility works - Stormwater collection and sewage system	99,242
Bill No. 12 : Day-Works Schedule	421,696
Provisional sum (contingencies)	500,000
Total	**$ 20,045,707.09**

Bill No. 01 : General and Preliminary Items WINNEBA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 22,134	22,134
1.02	Insurance of the Works	LS	1	$ 147,562	147,562
1.03	Third-Party Insurance	LS	1	$ 36,890	36,890
1.04	Advance Payment Guarantee	LS	1	$ 29,512	29,512
1.05	Retention Money Guarantee	LS	1	$ 3,689	3,689
	Temporary facilities and equipment.				
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 266,054	266,054
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	20	$ 2,306	46,116
1.13	Provide and equip Contractor's offices	LS	1	$ 489,539	489,539
1.14	Maintenance Contractor's offices during execution, including services	Mth	20	$ 3,193	63,853
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 35,474	35,474
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 70,209	70,209
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	20	$ 2,394	47,890
	Mobilization & Demobilization				
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 960,272	960,272
1.22	Preparation / maintenance Access roads	LS	1	$ 69,765	69,765
1.23	Site clearance	LS	1	$ 259,527	259,527
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 10,000	10,000
1.25	Demolition of houses	LS	1	$ 139,531	139,531
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 267,899	267,899
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5,000
				SUM total works (US$)	**2,970,916**

Bill No. 02 : Surveys and Investigations

WINNEBA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
2.00	**Pre-construction surveys**				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 16,255	32,511
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 19,758	19,758
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 3,205	3,205
2.10	**Pre- and Post-construction soil investigations**				
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	4	$ 34,883	139,531
2.12	Post-construction: Boreholes for backfill quaywall	no	6	$ 7,903	47,418
2.13	Soil investigations reclamation (CPT's)	no	13	$ 3,952	51,370
2.14	Soil investigations reclamation (boreholes)	no	3	$ 7,903	23,709
2.15	Laboratory soil tests	LS	1	$ 67,176	67,176
2.20	**Post-construction surveys (after completion of the reclamation, slope protections and breakwater)**				
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 16,255	16,255
2.22	Topographic post-survey the total project area	LS	1	$ 3,205	3,205
		SUM total works (US$)			**404,136**

Bill No. 03 : Maritime; Breakwater and Slope Protections WINNEBA

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Breakwater (Sea-end, behind quay wall part)				
3.02	General (wet) excavation and dredging	m^3	3,130	$ 50.93	159,408
3.11	Quarry Run, 0-40 kg	ton	5,190	$ 90.32	468,759
3.12	Rock, 10-60 kg	ton	2,930	$ 90.32	264,637
3.13	Rock, 60-300 kg	ton	1,680	$ 90.32	151,737
3.14	Rock, 300-1000 kg	ton	3,360	$ 93.45	313,996
3.16	Rock, 2000-5000 kg	ton	3,280	$ 98.16	321,963
3.17	Rock, 3000-6000 kg	ton	4,030	$ 98.16	395,582
	Slope Protection Quay Wall/ South Side				
3.02	General (wet) excavation and dredging	m^3	2,800	$ 50.93	142,602
3.11	Quarry Run, 0-40 kg	ton	7,360	$ 90.32	664,752
3.12	Rock, 10-60 kg	ton	4,450	$ 90.32	401,922
3.13	Rock, 60-300 kg	ton	5,810	$ 90.32	524,757
3.14	Rock, 300-1000 kg	ton	0	$ 93.45	-
3.15	Rock, 1000-3000 kg	ton	8,410	$ 98.16	825,521
3.21	Geotextile	m^2	1,740	$ 15.19	26,436
	Slope Protection Port Area Southern Part				
3.02	General (wet) excavation and dredging	m^3	4,650	$ 50.93	236,820
3.11	Quarry Run, 0-40 kg	ton	5,880	$ 90.32	531,079
3.12	Rock, 10-60 kg	ton	1,570	$ 90.32	141,802
3.13	Rock, 60-300 kg	ton	1,940	$ 90.32	175,220
3.15	Rock, 1000-3000 kg	ton	2,210	$ 98.16	216,932
3.16	Rock, 2000-5000 kg	ton	1,390	$ 98.16	136,442
	Slope Protection Port Area Northern Part				
3.02	General (wet) excavation and dredging	m^3	1,300	$ 50.93	66,208
3.11	Quarry Run, 0-40 kg	ton	1,340	$ 90.32	121,028
3.12	Rock, 10-60 kg	ton	1,130	$ 90.32	102,061
3.13	Rock, 60-300 kg	ton	950	$ 90.32	85,804
3.21	Geotextile	m^2	412	$ 15.19	6,260
		SUM total works (US$)			**6,481,728**

Bill No. 04 : Maritime; Quay Walls

WINNEBA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Northern Quay Wall (2x18x4m)				
4.02	General (wet) excavation and dredging	m^3	720	$ 51.08	36,779
4.11	Quarry Run, 0-40 kg	ton	4,380	$ 119.99	525,558
4.12	Crushed stone for foundation 40-70 mm	ton	240	$ 124.96	29,990
4.13	Back fill (behind blockwall)	ton	580	$ 95.16	55,192
4.14	Bed protection: Rock, 10-60 kg	ton	140	$ 119.99	16,799
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	100	$ 15.24	1,524
4.31	Blocks in quay wall	m^3	523	$ 1,526.12	797,777
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	43	$ 1,038.86	44,931
	Southern Quay Wall (2x18x5m; 2x18x6m)				
4.02	General (wet) excavation and dredging	m^3	2,670	$ 51.08	136,390
4.11	Quarry Run, 0-40 kg	ton	1,060	$ 119.99	127,190
4.12	Crushed stone for foundation 40-70 mm	ton	500	$ 124.96	62,478
4.13	Back fill (behind blockwall)	ton	2,320	$ 95.16	220,768
4.14	Bed protection: Rock, 10-60 kg	ton	260	$ 119.99	31,197
4.15	Supply, Place crushed stone for crown wall foundation (40-70mm)	ton	35	$ 124.96	4,435
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	100	$ 15.24	1,524
4.31	Blocks in quay wall	m^3	1,397	$ 1,419.78	1,983,781
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	73	$ 1,038.86	75,317
4.51	R.C. Crown wall; 3.5x0.5x72m (incl. reinf. 135 kg/m^3, dilatation joints ctc 18m, etc.	m^3	126	$ 1,185.50	149,373
	Entire Quay Wall				
4.81	Bollards, 10 ton (including per bollard: embedded anchors and 50kg reinforcement)	No	15	$ 6,278.78	94,182
4.82	Fenders	m	0	$ 2,026.98	0
4.83	Berthing rings	No	42	$ 1,268.19	53,264
		SUM total works (US$)			4,448,448

Construction of Fishing Ports and Fish Landing Sites (LOT 1)

Bill No. 05 : Earth works

WINNEBA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	**General excavation and dredging**				
3.01	General (dry) excavation (excl. Rock Blasting)	m^3	0	$ 29.96	-
3.02	General (wet) excavation and dredging (excl. Rock Blasting)	m^3	200	$ 51.08	10,216
3.02	Dredgin of port basin and approach channel (excl. Rock Blasting)	m^3	3,500	$ 51.08	178,788
5.10	**Reclamation and fill**				
5.11	General fill (except structural fill for buildings and roads)	m^3	23,200	$ 50.99	1,183,054
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1:1)	m^3	0	$ 54.69	-
5.13	Structural fill for roads/pavement (1m thick+ incl. shoulder width 1.5m)	m^3	6,000	$ 54.69	328,133
5.20	**Rock excavation**				
5.21	Rock excavation wet	m^3	1,200	$ 125.64	150,764
5.22	Rock excavation dry	m^3	0	$ 66.33	-
		SUM total works (US$)			1,850,956

Construction of Fishing Ports and Fish Landing Sites (LOT 1)

Bill No. 06 : Roads, Pavements and Fencing

WINNEBA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.00	Asphalt roads (AP)				
6.01	Natural gravel sub-base (thickness = 200mm) (refurbish existing roads as directed by the Engineer)	m^2	540	$ 20.52	11,082
6.10	Concrete Paving (CP) carriage ways and parking areas				
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	1,200	$ 102.60	123,121
6.30	Stelcon Sheets (SS)				
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	299	$ 59.12	17,666
3.21	Geotextile (between sand base and sub-grade)	m^2	1,288	$ 10.99	14,154
6.32	Stelcon sheets (2000x2000x200mm)	m^2	996	$ 282.53	281,404
6.40	Kerbs				
6.43	Kerb type 3 (150x150x1000mm), concrete C28/35	m	72	$ 30.88	2,223
6.80	Fencing				
6.81	Fence, 2.5m high (including poles, terminations, etc.)	m	320	$ 661.74	211,755
6.82	Gates	LS	1	$ 17,097.65	17,098
				SUM total works (US$)	678,505

Bill No. 07 : Buildings - Main

WINNEBA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suiteble lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.01	**Provisional sum Small Administration Office**	L.S.	1	195,000.00	195,000.00
	Fish Market				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rinsing water collection and discharge				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.03	**Provisional sum Fish Market**	L.S.	1	121,500.00	121,500.00
	Net Mending Shed (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.05	**Provisional sum Large Net Mending Shed**	L.S.	1	481,950.00	481,950.00
	Net Storage Building				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Exterior walls and doors, ventilation through perforated walls				
	Interior partition walls				
7.07	**Provisional sum Net Storage Building**	L.S.	0	0.00	0.00

	Ice Making Plant (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	All building related structures covered by an insulated roof structure				
	Doors, required insulating doors, windows, glazing, insulated glazing, architectural finishes, etc.				
	All required mechanical and electrical equipments for the plant and the building including the slides for the ice blocks. The installations need to be such that the plant can deliver as a mean production 15 tons of ice a day of the dimensions of 1x0.25x0.25m				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Plumbed installation for water distribution				
	Air-conditioning				
	Waste water collection and discharge				
	Parking and loading area				
7.09	**Provisional sum Large Ice Making Plant**	L.S.	1	593,750.00	593,750.00
	Workshop (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.11	**Provisional sum Large Workshop**	L.S.	1	94,687.50	94,687.50
	Daycare Centre				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and beams covered by a roof structure with all related elements such as guttering				
	Aluminium roof structure				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Exterior walled playground with small structures with the related facilities and utilities				
7.15	**Provisional sum Daycare Centre**	L.S.	1	193,750.00	193,750.00
	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.17	**Provisional sum Small Toilet Block**	L.S.	1	51,156.00	51,156.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	1,752,293.50

Bill No. 08 : Utility Works - Fresh water supply

WINNEBA

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	500	$ 126.50	63,252
			SUM total works (US$)		63,252

Construction of Fishing Ports and Fish Landing Sites (LOT 1)

Bill No. 09 : Utility Works - Power supply and ligthing system

WINNEBA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	**Power supply - lines**				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m^3/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	530	$ 489.96	259,677
				SUM total works (US$)	259,677

Bill No. 10 : Utility works - Stormwater collection and sewage system **WINNEBA**

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.4	Crossing culvert				
10.41	R.C. Crossing culvert, 2x 1.0x1.0m (reinforcement, 140 kg/ m^3), 135m length	m^3	270	$ 1,241.75	335,272
10.7	Sewage system - pipes and inspection pits				
10.71	Pipe Ø160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	160	$ 115.68	18,509
10.72	Inspection pit	no	3	$ 8,276.68	24,830
				SUM total works (US$)	378,611

Construction of Fishing Ports and Fish Landing Sites (LOT 1)

Bill No. 12 : Day-Works Schedule

WINNEBA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	400	$4.85	1,942
12.02	Foreman	hour	120	$8.50	1,020
12.03	Steel bender / fixer	hour	40	$12.42	497
12.04	Concreter	hour	40	$12.42	497
12.05	Workshop mechanic	hour	80	$12.42	994
12.06	Heavy equipment mechanic	hour	40	$12.42	497
12.07	Welder	hour	40	$12.42	497
12.08	Watchman	hour	40	$6.20	248
12.09	Marine surveyor	hour	40	$13.60	544
12.10	Topographical surveyor	hour	40	$12.42	497
12.11	Diver including equipment	hour	40	$27.81	1,112
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	80	$110.68	8,854
12.22	Bulldozer, ~350hp	hour	40	$138.35	5,534
12.23	Excavator ~2m^3	hour	80	$225.89	18,071
12.24	Excavator ~4m^3	hour	40	$338.82	13,553
12.25	Wheel loader ~4m^3	hour	80	$225.89	18,071
12.26	Dump truck ~8 ton	hour	80	$76.10	6,088
12.27	Shovel wheel loader ~2m^3	hour	40	$155.97	6,239
12.28	Tractor with scraper ~7m^3	hour	80	$165.58	13,247
12.29	Motor grader ~100hp	hour	80	$110.67	8,854
12.30	Welding equipment	hour	40	$27.68	1,107
12.31	Concrete mixer ~500ltr	hour	80	$105.65	8,452
12.32	Concrete mixer truck ~3m^3	hour	40	$95.21	3,808
12.33	Crawler crane	hour	40	$537.60	21,504
12.34	Tower crane	hour	40	$470.40	18,816
12.35	Barge	hour	80	$657.22	52,577
12.36	Self-propelled barge	hour	40	$834.62	33,385
12.37	Tug boat	hour	20	$938.11	18,762
12.38	Hydrographic survey launch	hour	40	$486.53	19,461
12.39	Backhoe dregder (incl. barge)	hour	40	$1,300.99	52,040
12.40	Crane barge	hour	40	$1,685.38	67,415
12.41	Pontoon	hour	40	$138.39	5,536
12.42	Road Roller 8 Ton	hour	80	$80.88	6,470
12.43	Grinding Machine	hour	80	$68.86	5,508
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
		SUM total works (US$)			421,696.08

Construction of Fishing Ports and Fish Landing Sites (LOT 1)

Bill No. 100 : SUMMARY

WINNEBA

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	2,970,916
Bill No. 02 : Surveys and Investigations	404,136
Bill No. 03 : Maritime; Breakwater and Slope Protections	6,481,728
Bill No. 04 : Maritime; Quay Walls	4,448,448
Bill No. 05 : Earth works	1,850,956
Bill No. 06 : Roads, Pavements and Fencing	678,505
Bill No. 07: Building	1,752,294
Bill No. 08 : Utility Works - Fresh water supply	63,252
Bill No. 09 : Utility Works - Power supply and ligthing system	259,677
Bill No. 10 : Utility works - Stormwater collection and sewage system	378,611
Bill No. 12 : Day-Works Schedule	421,696
Provisional sum (contingencies)	500,000
Total	**20,210,219**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 01 : General and Preliminary Items

FETE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 15,323	15,323
1.02	Insurance of the Works	LS	1	$ 102,152	102,152
1.03	Third-Party Insurance	LS	1	$ 25,539	25,539
1.04	Advance Payment Guarantee	LS	1	$ 20,430	20,430
1.05	Retention Money Guarantee	LS	1	$ 2,554	2,554
				$ -	
	Temporary facilities and equipment.			$ -	
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 350,496	350,496
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	16	$ 3,038	48,602
1.13	Provide and equip Contractor's offices	LS	1	$ 644,913	644,913
1.14	Maintenance Contractor's offices during execution, including services	Mth	16	$ 4,206	67,295
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 46,733	46,733
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 92,492	92,492
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	16	$ 3,154	50,471
				$ -	
	Mobilization & Demobilization			$ -	
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 770,761	770,761
1.22	Preparation / maintenance Access roads	LS	1	$ 93,466	93,466
1.23	Site clearance	LS	1	$ 140,198	140,198
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 5,000	5,000
1.25	Demolition of houses	LS	1	$ 116,832	116,832
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 178,753	178,753
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5,000
1.28	Removal of ship wreck on beach (approximale dimensions: 36m long x 9m wide, steel frame)	LS	1	$ 245,347	245,347
				SUM total works (US$)	**3,022,356**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 02 : Surveys and Investigations

FETE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
2.00	**Pre-construction surveys**				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 22,058	44,116
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 26,028	26,028
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 5,735	5,735
				$ -	
2.10	**Pre- and Post-construction soil investigations**			$ -	
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	2	$ 45,954	91,908
2.12	Post-construction: Boreholes for backfill quaywall	no	3	$ 10,411	31,232
2.13	Soil investigations reclamation (CPT's)	no	5	$ 5,206	26,029
2.14	Soil investigations reclamation (borcholes)	no	2	$ 10,411	20,821
2.15	Laboratory soil tests	LS	1	$ 52,056	52,056
				$ -	
2.20	**Post-construction surveys (after completion of the reclamation, slope protections and breakwater)**			$ -	
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 22,058	22,058
2.22	Topographic post-survey the total project area	LS	1	$ 5,735	5,735
	SUM total works (US$)				325,720

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 03 : Maritime; Breakwater and Slope Protections

FETE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Main Breakwater (Sea-end, after quay wall part)				
3.02	General (wet) excavation and dredging	m^3	1,500	$ 67.30	100,943
				$ -	
3.11	Quarry Run, 0-40 kg	ton	2,910	$ 114.48	333,125
3.12	Rock, 10-60 kg	ton	1,960	$ 114.48	224,373
3.13	Rock, 60-300 kg	ton	2,560	$ 114.48	293,058
3.15	Rock, 1000-3000 kg	ton	3,830	$ 124.83	478,118
				$ -	
	Little Breakwater (perpendicular to quay wall)			$ -	
3.02	General (wet) excavation and dredging	m^3	300	$ 67.30	20,189
				$ -	
3.11	Quarry Run, 0-40 kg	ton	450	$ 114.48	51,514
3.12	Rock, 10-60 kg	ton	300	$ 114.48	34,343
3.13	Rock, 60-300 kg	ton	350	$ 114.48	40,067
				$ -	
	Slope Protection Quay Wall/ South Side			$ -	
3.02	General (wet) excavation and dredging	m^3	1,320	$ 67.30	88,830
				$ -	
3.11	Quarry Run, 0-40 kg	ton	4,930	$ 114.48	564,366
3.12	Rock, 10-60 kg	ton	1,500	$ 114.48	171,714
3.13	Rock, 60-300 kg	ton	2,090	$ 114.48	239,255
3.15	Rock, 1000-3000 kg	ton	3,540	$ 124.83	441,916
				$ -	
	Slope Protection Port Area Northern Part			$ -	
3.02	General (wet) excavation and dredging	m^3	1,000	$ 67.30	67,295
				$ -	
3.11	Quarry Run, 0-40 kg	ton	820	$ 114.48	93,870
3.12	Rock, 10-60 kg	ton	820	$ 114.48	93,870
3.13	Rock, 60-300 kg	ton	1,330	$ 114.48	152,253
				$ -	
3.21	Geotextile	m^2	400	$ 20.08	8,030
				$ -	
	Boundary Breakwater (North side)			$ -	
3.02	General (wet) excavation and dredging	m^3	750	$ 67.30	50,471
				$ -	
3.11	Quarry Run, 0-40 kg	ton	460	$ 114.48	52,659
3.12	Rock, 10-60 kg	ton	350	$ 114.48	40,067
3.14	Rock, 300-1000 kg	ton	550	$ 118.61	65,238
				$ -	
	Beach Revetment (between breakwaters)			$ -	
3.02	General (wet) excavation and dredging	m^3	2,630	$ 67.30	176,986
				$ -	
3.11	Quarry Run, 0-40 kg	ton	2,730	$ 114.48	312,519
3.12	Rock, 10-60 kg	ton	2,300	$ 114.48	263,295
3.13	Rock, 60-300 kg	ton	1,940	$ 114.48	222,083
				$ -	
3.21	Geotextile	m^2	850	$ 20.08	17,064
				SUM total works (US$)	**4,697,510**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

FETE

Bill No. 04 : Maritime; Quay Walls

Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
		Contract Values and Quantities			
	Specific Items				
	Northern Quay Wall (2x18x5m)				
4.02	General (wet) excavation and dredging	m^3	900	$ 67.30	60,566
				$ -	
4.11	Quarry Run, 0-40 kg	ton	480	$ 153.21	73,539
4.12	Crushed stone for foundation 40-70 mm	ton	240	$ 159.75	38,340
4.13	Back fill (behind blockwall)	ton	980	$ 120.49	118,083
4.14	Bed protection: Rock, 10-60 kg	ton	130	$ 153.21	19,917
4.15	Supply, Place crushed stone for crown wall foundation (40-70mm)	ton	18	$ 159.75	2,835
				$ -	
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	200	$ 20.08	4,015
				$ -	
4.31	Blocks in quay wall	m^3	806	$ 1,821.71	1,468,300
				$ -	
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3 dilatation joints ctc 18m, etc.)	m^3	51	$ 1,319.90	67,645
				$ -	
4.51	R.C. Crown wall; 3.5x0.5x36m (incl. reinf. 135 kg/m^3, dilatation joints ctc 18m, etc.	m^3	63	$ 1,513.08	95,324
				$ -	
4.81	Bollards, 10 ton (including per bollard: embedded anchors and 50kg reinforcement)	No	6	$ 8,271.58	49,629
4.82	Fenders	m	0	$ 2,670.32	-
4.83	Berthing rings	No	18	$ 1,670.70	30,073
				SUM total works (US$)	2,028,265

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 05 : Earth works

FETE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	**General excavation and dredging**				
3.01	General (dry) excavation for road construction	m^3	1,200	$ 39.47	47,364
3.02	Dredgin of port basin and approach channel (excl. Rock Blasting)	m^3	2,150	$ 67.28	144,655
				$ -	
5.10	**Reclamation and fill**			$ -	
5.11	General fill to (except structural fill for buildings and roads)	m^3	13,100	$ 47.70	624,825
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1:1)	m^3	0	$ 52.56	-
5.13	Structural fill for roads/pavement (1m thick+ incl. shoulder width 1.5m)	m^3	2,250	$ 52.56	118,268
5.14	Fill for landing beach	m^3	7,300	$ 47.70	348,185
				$ -	
5.20	**Rock excavation**			$ -	
5.21	Rock excavation wet	m^3	600	$ 165.48	99,287
5.22	Rock excavation dry	m^3	1,200	$ 87.36	104,835
			SUM total works (US$)		1,487,419

Bill No. 06 : Roads, Pavements and Fencing

FETE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.10	Concrete Paving (CP) carriage ways and parking areas				
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	500	$ 130.30	65,148
				$ -	
6.30	Stelcon Sheets (SS)			$ -	
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	108	$ 58.42	6,309
3.21	Geotextile (between sand base and sub-grade)	m^2	488	$ 14.48	7,065
6.32	Stelcon sheets (2000x2000x200mm)	m^2	360	$ 372.21	133,995
				$ -	
6.40	Kerbs			$ -	
6.43	Kerb type 3 (150x150x1000mm), concrete C28/35	m	36	$ 40.68	1,464
		SUM total works (US$)			213,981

Bill No. 07 : Buildings - Main

FETE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminum plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.02	**Provisional sum Small Administration Office**	L.S.	1	195,000.00	195,000.00
	Net Mending Shed (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.06	**Provisional sum Small Net Mending Shed**	L.S.	1	202,650.00	202,650.00
	Workshop (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.12	**Provisional sum Small Workshop**	L.S.	1	45,437.50	45,437.50

	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.18	**Provisional sum Small Toilet Block**	L.S.	1	51,156.00	51,156.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	514,743.50

Bill No. 08 : Utility Works - Fresh water supply

FETE

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	460	$ 165.99	76,355
	SUM total works (US$)				76,355

Bill No. 09 : Utility Works - Power supply and ligthing system FETE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	**Power supply - lines**				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m^3/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	570	$ 339.49	193,512
				SUM total works (US$)	**193,512**

Bill No. 10 : Utility works - Stormwater collection and sewage system FETE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.7	Sewage system - pipes and inspection pits				
10.71	Pipe Ø160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	150	$ 149.97	22,496
10.72	Inspection pit	no	4	$ 10,722.78	42,891
				SUM total works (US$)	65,387

Bill No. 12 : Day-Works Schedule

FETE

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	200	$4.85	971
12.02	Foreman	hour	60	$8.50	510
12.03	Steel bender / fixer	hour	20	$12.42	248
12.04	Concreter	hour	20	$12.42	248
12.05	Workshop mechanic	hour	40	$12.42	497
12.06	Heavy equipment mechanic	hour	20	$12.42	248
12.07	Welder	hour	20	$12.42	248
12.08	Watchman	hour	20	$6.20	124
12.09	Marine surveyor	hour	20	$13.60	272
12.10	Topographical surveyor	hour	20	$12.42	248
12.11	Diver including equipment	hour	20	$27.81	556
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	40	$110.68	4,427
12.22	Bulldozer, ~350hp	hour	20	$138.35	2,767
12.23	Excavator ~2m^3	hour	40	$225.89	9,036
12.24	Excavator ~4m^3	hour	20	$338.82	6,776
12.25	Wheel loader ~4m^3	hour	40	$225.89	9,036
12.26	Dump truck ~8 ton	hour	40	$76.10	3,044
12.27	Shovel wheel loader ~2m^3	hour	20	$155.97	3,119
12.28	Tractor with scraper ~7m^3	hour	40	$165.58	6,623
12.29	Motor grader ~100hp	hour	40	$110.67	4,427
12.30	Welding equipment	hour	20	$27.68	554
12.31	Concrete mixer ~500ltr	hour	40	$105.65	4,226
12.32	Concrete mixer truck ~3m^3	hour	20	$95.21	1,904
12.33	Crawler crane	hour	20	$537.60	10,752
12.34	Tower crane	hour	20	$470.40	9,408
12.35	Barge	hour	40	$657.22	26,289
12.36	Self-propelled barge	hour	20	$834.62	16,692
12.37	Tug boat	hour	10	$938.11	9,381
12.38	Hydrographic survey launch	hour	20	$486.53	9,731
12.39	Backhoe dregder (incl. barge)	hour	20	$1,300.99	26,020
12.40	Crane barge	hour	20	$1,685.38	33,708
12.41	Pontoon	hour	20	$138.39	2,768
12.42	Road Roller 8 Ton	hour	40	$80.88	3,235
12.43	Grinding Machine	hour	40	$68.86	2,754
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
		SUM total works (US$)			210,848

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 100 : SUMMARY FETE

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	3,022,356
Bill No. 02 : Surveys and Investigations	325,720
Bill No. 03 : Maritime; Breakwater and Slope Protections	4,697,510
Bill No. 04 : Maritime; Quay Walls	2,028,265
Bill No. 05 : Earth works	1,487,419
Bill No. 06 : Roads, Pavements and Fencing	213,981
Bill No.07: Building	514,744
Bill No. 08 : Utility Works - Fresh water supply	76,355
Bill No. 09 : Utility Works - Power supply and ligthing system	193,512
Bill No. 10 : Utility works - Stormwater collection and sewage system	65,387
Bill No. 12 : Day-Works Schedule	210,848
Provisional sum (contingencies)	250,000
Total	**13,086,097.16**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 01 : General and Preliminary Items — JAMESTOWN

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 27,741	27,741
1.02	Insurance of the Works	LS	1	$ 184,944	184,944
1.03	Third-Party Insurance	LS	1	$ 46,235	46,235
1.04	Advance Payment Guarantee	LS	1	$ 36,989	36,989
1.05	Retention Money Guarantee	LS	1	$ 4,624	4,624
				$ -	
	Temporary facilities and equipment.			$ -	
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 350,874	350,874
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	24	$ 3,041	72,982
1.13	Provide and equip Contractor's offices	LS	1	$ 645,608	645,608
1.14	Maintenance Contractor's offices during execution, including services	Mth	24	$ 4,210	101,052
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 46,783	46,783
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 92,592	92,592
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	24	$ 3,158	75,789
				$ -	
	Mobilization & Demobilization			$ -	
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 770,168	770,168
1.22	Preparation / maintenance Access roads	LS	1	$ 116,958	116,958
1.23	Site clearance	LS	1	$ 142,689	142,689
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 10,000	10,000
1.25	Demolition of houses	LS	1	$ 116,958	116,958
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 178,946	178,946
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5,000
		SUM total works (US$)			**3,026,932**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 02 : Surveys and Investigations — JAMESTOWN

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
2.00	**Pre-construction surveys**				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 29,246	58,493
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 26,056	26,056
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 5,698	5,698
				$ -	
2.10	**Pre- and Post-construction soil investigations**			$ -	
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	4	$ 46,003	184,014
2.12	Post-construction: Boreholes for backfill quaywall	no	6	$ 10,422	62,532
2.13	Soil investigations reclamation (CPT's)	no	9	$ 5,211	46,903
2.14	Soil investigations reclamation (boreholes)	no	2	$ 10,422	20,844
2.15	Laboratory soil tests	LS	1	$ 27,793	27,793
				$ -	
2.20	**Post-construction surveys (after completion of the reclamation, slope protections and breakwater)**			$ -	
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 29,246	29,246
2.22	Topographic post-survey the total project area	LS	1	$ 5,698	5,698
		SUM total works (US$)			**467,276**

Bill No. 03 : Maritime; Breakwater and Slope Protections — JAMESTOWN

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Breakwater (Sea-end, behind quay wall part)				
3.02	General (wet) excavation and dredging	m^3	2,800	$ 67.37	188,630
				$ -	
3.11	Quarry Run, 0-40 kg	ton	2,550	$ 114.60	292,228
3.12	Rock, 10-60 kg	ton	1,970	$ 114.60	225,761
3.14	Rock, 300-1000 kg	ton	3,980	$ 118.74	472,592
3.16	Rock, 2000-5000 kg	ton	4,030	$ 124.97	503,628
				$ -	
	Slope Protection Quay Wall/ South Side Port Area			$ -	
3.02	General (wet) excavation and dredging	m^3	10,200	$ 67.37	687,152
				$ -	
3.11	Quarry Run, 0-40 kg	ton	14,520	$ 114.60	1,663,983
3.12	Rock, 10-60 kg	ton	6,610	$ 114.60	757,502
3.14	Rock, 300-1000 kg	ton	14,700	$ 118.74	1,745,502
3.16	Rock, 2000-5000 kg	ton	19,100	$ 124.97	2,386,920
				$ -	
3.21	Geotextile	m^2	670	$ 20.10	13,465
				$ -	
	Slope Protection Port Area Northern Part			$ -	
3.02	General (wet) excavation and dredging	m^3	1,300	$ 67.37	87,578
				$ -	
3.11	Quarry Run, 0-40 kg	ton	6,760	$ 114.60	774,692
3.12	Rock, 10-60 kg	ton	1,680	$ 114.60	192,527
3.13	Rock, 60-300 kg	ton	2,390	$ 114.60	273,892
3.15	Rock, 1000-3000 kg	ton	4,070	$ 124.97	508,626
		SUM total works (US$)			**10,774,676**

Bill No. 04 : Maritime; Quay Walls — JAMESTOWN

Item No	Description	Unit	Qty	Contract Values and Quantities: Unit Rate US$	Amount US$
	Specific Items				
	Western Quay Wall (2x18x4m)				
4.02	General (wet) excavation and dredging	m^3	400	$ 67.37	26,947
				$ -	
4.11	Quarry Run, 0-40 kg	ton	440	$ 153.37	67,483
4.12	Crushed stone for foundation 40-70 mm	ton	240	$ 159.92	38,381
4.13	Back fill (behind blockwall)	ton	580	$ 120.62	69,961
4.14	Bed protection: Rock, 10-60 kg	ton	150	$ 153.37	23,006
				$ -	
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	100	$ 20.10	2,010
				$ -	
4.31	Blocks in quay wall	m^3	523	$ 1,823.68	953,783
				$ -	
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	43	$ 1,321.32	57,147
				$ -	
	Eastern Quay Wall (2x18x5m; 2x18x6m)			$ -	
4.02	General (wet) excavation and dredging	m^3	850	$ 67.37	57,263
				$ -	
4.11	Quarry Run, 0-40 kg	ton	1,930	$ 153.37	296,006
4.12	Crushed stone for foundation 40-70 mm	ton	520	$ 159.92	83,159
4.13	Back fill (behind blockwall)	ton	1,250	$ 120.62	150,778
4.14	Bed protection: Rock, 10-60 kg	ton	270	$ 153.37	41,410
				$ -	
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	100	$ 20.10	2,010
				$ -	
4.31	Blocks in quay wall	m^3	1,398	$ 1,823.68	2,548,589
				$ -	
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	73	$ 1,321.32	95,796
				$ -	
	Entire Quay Wall			$ -	
4.81	Bollards, 10 ton (including per bollard: embedded anchors and 50kg reinforcement)	No	15	$ 8,280.50	124,207
4.82	Fenders	m	0	$ 2,673.20	-
4.83	Berthing rings	No	42	$ 1,672.50	70,245
				SUM total works (US$)	**4,708,181**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 05 : Earth works **JAMESTOWN**

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	**General excavation and dredging**				
3.01	General (dry) excavation (excl. Rock Blasting)	m^3	1,500	$ 39.51	59,268
3.02	General (wet) excavation and dredging (excl. Rock Blastirg)	m^3	0	$ 67.37	-
3.02	Dredgin of port basin and approach channel (excl. Rock Blasting)	m^3	8,000	$ 67.37	538,942
				$ -	
5.10	**Reclamation and fill**			$ -	
5.11	General fill (except structural fill for buildings and roads)	m^3	19,350	$ 47.76	924,114
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1:1)	m^3	0	$ 52.63	-
5.13	Structural fill for roads/pavement in port area (1m thick)	m^3	3,600	$ 52.63	189,472
5.13	Structural fill for roads outside port area (1m thick+ incl. shoulder width 1.5m)	m^3	1,710	$ 52.63	89,999
			SUM total works (US$)		1,801,796

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 06 : Roads, Pavements and Fencing — JAMESTOWN

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.00	**Asphalt roads (AP)**				
6.01	Natural gravel sub-base (thickness = 200mm)	m^2	230	$ 26.09	6,001
				$ -	
6.10	**Concrete Paving (CP) carriage ways and parking areas**			$ -	
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	720	$ 130.44	93,915
				$ -	
6.30	**Stelcon Sheets (SS)**			$ -	
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	299	$ 58.48	17,474
3.21	Geotextile (between sand base and sub-grade)	m^2	1,360	$ 14.49	19,711
6.32	Stelcon sheets (2000x2000x200mm)	m^2	996	$ 372.61	371,118
				$ -	
6.80	**Fencing**			$ -	
6.81	Fence, 2.5m high (including poles, terminations, etc.)	m	105	$ 872.70	91,634
6.82	Gates	no	1	$ 22,548.51	22,549
	SUM total works (US$)				**622,400**

Bill No. 07 : Buildings - Main JAMESTOWN

Item No	Description	Contract Values and Quantities Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.01	**Provisional sum Small Administration Office**	L.S.	1	195,000.00	195,000.00
	Fish Market				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rinsing water collection and discharge				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.03	**Provisional sum Fish Market**	L.S.	1	121,500.00	121,500.00
	Net Mending Shed (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.06	**Provisional sum Small Net Mending Shed**	L.S.	1	202,650.00	202,650.00
	Workshop (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.11	**Provisional sum Large Workshop**	L.S.	1	94,687.30	94,687.30

	Daycare Centre				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and beams covered by a roof structure with all related elements such as guttering				
	Aluminium roof structure				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity , telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Exterior walled playground with small structures with the related facilities and utilities				
7.15	**Provisional sum Daycare Centre**	L.S.	1	193,750.00	193,750.00
	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.17	**Provisional sum Small Toilet Block**	L.S.	1	51,156.00	51,156.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	879,243.30

Bill No. 08 : Utility Works - Fresh water supply

JAMESTOWN

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	470	$ 166.17	78,099
	SUM total works (US$)				78,099

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 09 : Utility Works - Power supply and ligthing system

JAMESTOWN

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	Power supply - lines				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m^3/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	760	$ 507.79	385,922
	SUM total works (US$)				385,922

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 10 : Utility works - Stormwater collection and sewage system **JAMESTOWN**

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.7	Sewage system - pipes and inspection pits				
10.71	Pipe Ø160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	180	$ 150.14	27,024
10.72	Inspection pit	no	5	$ 10,734.35	53,672
				SUM total works (US$)	80,696

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 12 : Day-Works Schedule **JAMESTOWN**

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	400	$4.85	1,942
12.02	Foreman	hour	120	$8.50	1,020
12.03	Steel bender / fixer	hour	40	$12.42	497
12.04	Concreter	hour	40	$12.42	497
12.05	Workshop mechanic	hour	80	$12.42	994
12.06	Heavy equipment mechanic	hour	40	$12.42	497
12.07	Welder	hour	40	$12.42	497
12.08	Watchman	hour	40	$6.20	248
12.09	Marine surveyor	hour	40	$13.60	544
12.10	Topographical surveyor	hour	40	$12.42	497
12.11	Diver including equipment	hour	40	$27.81	1,112
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	80	$110.68	8,854
12.22	Bulldozer, ~350hp	hour	40	$138.35	5,534
12.23	Excavator ~2m^3	hour	80	$225.89	18,071
12.24	Excavator ~4m^3	hour	40	$338.82	13,553
12.25	Wheel loader ~4m^3	hour	80	$225.89	18,071
12.26	Dump truck ~8 ton	hour	80	$76.10	6,088
12.27	Shovel wheel loader ~2m^3	hour	40	$155.97	6,239
12.28	Tractor with scraper ~7m^3	hour	80	$165.58	13,247
12.29	Motor grader ~100hp	hour	80	$110.67	8,854
12.30	Welding equipment	hour	40	$27.68	1,107
12.31	Concrete mixer ~500ltr	hour	80	$105.65	8,452
12.32	Concrete mixer truck ~3m^3	hour	40	$95.21	3,808
12.33	Crawler crane	hour	40	$537.60	21,504
12.34	Tower crane	hour	40	$470.40	18,816
12.35	Barge	hour	80	$657.22	52,577
12.36	Self-propelled barge	hour	40	$834.62	33,385
12.37	Tug boat	hour	20	$938.11	18,762
12.38	Hydrographic survey launch	hour	40	$486.53	19,461
12.39	Backhoe dregder (incl. barge)	hour	40	$1,300.99	52,040
12.40	Crane barge	hour	40	$1,685.38	67,415
12.41	Pontoon	hour	40	$138.39	5,536
12.42	Road Roller 8 Ton	hour	80	$80.88	6,470
12.43	Grinding Machine	hour	80	$68.86	5,508
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
		SUM total works (US$)			421,696

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 100 : SUMMARY

JAMESTOWN

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	3,026,932
Bill No. 02 : Surveys and Investigations	467,276
Bill No. 03 : Maritime; Breakwater and Slope Protections	10,774,676
Bill No. 04 : Maritime; Quay Walls	4,708,181
Bill No. 05 : Earth works	1,801,796
Bill No. 06 : Roads, Pavements and Fencing	622,400
Bill No. 07: Building	879,243
Bill No. 08 : Utility Works - Fresh water supply	78,099
Bill No. 09 : Utility Works - Power supply and ligthing system	385,922
Bill No. 10 : Utility works - Stormwater collection and sewage system	80,696
Bill No. 12 : Day-Works Schedule	421,696
Provisional sum (contingencies)	500,000
Total	**23,746,919**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 01 : General and Preliminary Items

SENYA BERAKU

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 9,978	9,978
1.02	Insurance of the Works	LS	1	$ 66,365	66,365
1.03	Third-Party Insurance	LS	1	$ 16,591	16,591
1.04	Advance Payment Guarantee	LS	1	$ 13,273	13,273
1.05	Retention Money Guarantee	LS	1	$ 1,659	1,659
				$ -	
	Temporary facilities and equipment.			$ -	
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 350,388	350,388
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	14	$ 3,037	42,514
1.13	Provide and equip Contractor's offices	LS	1	$ 644,714	644,714
1.14	Maintenance Contractor's offices during execution, including services	Mth	14	$ 4,205	58,865
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 46,718	46,718
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 92,464	92,464
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	14	$ 3,153	44,149
				$ -	
	Mobilization & Demobilization			$ -	
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 796,314	796,314
1.22	Preparation / maintenance Access roads	LS	1	$ 58,398	58,398
1.23	Site clearance	LS	1	$ 116,796	116,796
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 5,000	5,000
1.25	Demolition of houses	LS	1	$ 93,437	93,437
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 179,150	179,150
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5,000
		SUM total works (US$)			**2,641,773**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 02 : Surveys and Investigations

SENYA BERAKU

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
2.00	Pre-construction surveys				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 18,376	36,752
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 26,020	26,020
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 5,543	5,543
				$ -	
2.10	Pre- and Post-construction soil investigations			$ -	
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	0	$ 45,940	-
2.12	Post-construction: Boreholes for backfill quaywall	no	0	$ 10,407	-
2.13	Soil investigations reclamation (CPT's)	no	5	$ 5,203	26,016
2.14	Soil investigations reclamation (boreholes)	no	2	$ 10,407	20,815
2.15	Laboratory soil tests	LS	1	$ 10,407	10,407
				$ -	
2.20	Post-construction surveys (after completion of the reclamation, slope protections and breakwater)			$ -	
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 18,376	18,376
2.22	Topographic post-survey the total project area	LS	1	$ 5,543	5,543
	SUM total works (US$)				149,473

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 03 : Maritime; Breakwater and Slope Protections

SENYA BERAKU

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Large Breakwater (South)				
3.02	General (wet) excavation and dredging	m^3	3,950	$ 67.27	265,734
				$ -	
3.11	Quarry Run, 0-40 kg	ton	7,160	$ 114.44	819,395
3.12	Rock, 10-60 kg	ton	3,780	$ 114.44	432,586
3.13	Rock, 60-300 kg	ton	2,260	$ 114.44	258,636
3.14	Rock, 300-1000 kg	ton	4,170	$ 118.58	494,467
3.16	Rock, 2000-5000 kg	ton	3,840	$ 124.80	479,219
3.17	Rock, 3000-6000 kg	ton	5,080	$ 124.80	633,966
				$ -	
	Small Breakwater (North)			$ -	
3.02	General (wet) excavation and dredging	m^3	1,200	$ 67.27	80,729
				$ -	
3.11	Quarry Run, 0-40 kg	ton	800	$ 114.44	91,552
3.12	Rock, 10-60 kg	ton	660	$ 114.44	75,531
3.13	Rock, 60-300 kg	ton	160	$ 114.44	18,310
3.14	Rock, 300-1000 kg	ton	910	$ 118.58	107,905
3.31	Concrete blocks (stairs) (0,6x0,2x1,5m and 0,6x0,4x1,5m)	m^3	4	$ 1,295.95	5,184
				$ -	
	Beach Revetment (south of small breakwater in the north)			$ -	
3.02	General (wet) excavation and dredging	m^3	700	$ 67.27	47,092
				$ -	
3.11	Quarry Run, 0-40 kg	ton	740	$ 114.44	84,686
3.12	Rock, 10-60 kg	ton	620	$ 114.44	70,953
3.13	Rock, 60-300 kg	ton	520	$ 114.44	59,509
			SUM total works (US$)		4,025,455

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 05 : Earth works

SENYA BERAKU

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	General excavation and dredging				
3.01	General (dry) excavation (excl. Rock Blasting) (levelling at locations of future buildings and roads)	m^3	1,000	$ 39.46	39,458
3.02	General (wet) excavation and dredgng (excl. Rock Blasting)	m^3	0	$ 67.27	-
3.02	Dredgin of port basin and approach channel (excl. Rock Blasting)	m^3	100	$ 67.27	6,727
				$ -	
5.10	Reclamation and fill			$ -	
5.11	General fill to (except structural fill for buildings and roads)	m^3	400	$ 47.69	19,077
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1:1)	m^3	0	$ 52.56	-
5.13	Structural fill for roads/pavement port area (1m thick)	m^3	850	$ 52.56	44,674
5.13	Structural fill for asphalt road (6m wide, shoulder width 1m)	m^3	1,400	$ 52.56	73,581
5.14	Landing beach	m^3	10,800	$ 47.69	515,070
				$ -	
5.20	Rock excavation			$ -	
5.21	Rock excavation wet	m^3	0	$ 165.46	-
5.22	Rock excavation dry	m^3	600	$ 87.35	52,412
			SUM total works (US$)		751,000.23

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 06 : Roads, Pavements and Fencing

SENYA BERAKU

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.00	Asphalt roads (AP)				
6.01	Natural gravel sub-base (thickness = 200mm)	m^2	280	$ 26.06	7,295
6.10	Concrete Paving (CP) carriage ways and parking areas				
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	1,050	$ 130.26	136,770
	SUM total works (US$)				144,065

Bill No. 07 : Buildings - Main SENYA BERAKU

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.02	**Provisional sum Small Administration Office**	L.S.	1	195,000.00	195,000.00
	Net Mending Shed (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.06	**Provisional sum Small Net Mending Shed**	L.S.	1	202,650.00	202,650.00
	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.18	**Provisional sum Small Toilet Block**	L.S.	1	51,156.00	51,156.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	469,306.00

Bill No. 08 : Utility Works - Fresh water supply

SENYA BERAKU

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	180	$ 165.94	29,869
				SUM total works (US$)	29,869

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 09 : Utility Works - Power supply and ligthing system

SENYA BERAKU

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	Power supply - lines				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m^3/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	200	$ 290.53	58,106
				SUM total works (US$)	58,106

Bill No. 10 : Utility works - Stormwater collection and sewage system

SENYA BERAKU

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.4	Crossing culvert				
10.41	Crossing culvert, 2x 2.0x1.5m (reinforced concrete, 130 kg/ m^3), length 7.5m	m^3	30	$ 1,735.84	52,075
10.7	Sewage system - pipes and inspection pits				
10.71	Pipe Ø160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	50	$ 149.91	7,496
10.72	Inspection pit	no	1	$ 10,718.38	10,718
	SUM total works (US$)				70,289

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 12 : Day-Works Schedule SENYA BERAKU

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	200	$4.85	971
12.02	Foreman	hour	60	$8.50	510
12.03	Steel bender / fixer	hour	20	$12.42	248
12.04	Concreter	hour	0	$12.42	-
12.05	Workshop mechanic	hour	40	$12.42	497
12.06	Heavy equipment mechanic	hour	20	$12.42	248
12.07	Welder	hour	20	$12.42	248
12.08	Watchman	hour	20	$6.20	124
12.09	Marine surveyor	hour	20	$13.60	272
12.10	Topographical surveyor	hour	20	$12.42	248
12.11	Diver including equipment	hour	0	$27.81	-
				$0.00	
12.20	PLANT			$0.00	
12.21	Bulldozer, ~ 200hp	hour	40	$110.68	4,427
12.22	Bulldozer, ~350hp	hour	20	$138.35	2,767
12.23	Excavator ~2m^3	hour	40	$225.89	9,036
12.24	Excavator ~4m^3	hour	20	$338.82	6,776
12.25	Wheel loader ~4m^3	hour	40	$225.89	9,036
12.26	Dump truck ~8 ton	hour	40	$76.10	3,044
12.27	Shovel wheel loader ~2m^3	hour	20	$155.97	3,119
12.28	Tractor with scraper ~7m^3	hour	40	$165.58	6,623
12.29	Motor grader ~100hp	hour	40	$80.92	3,237
12.30	Welding equipment	hour	20	$27.68	554
12.31	Concrete mixer ~500ltr	hour	0	$115.90	-
12.32	Concrete mixer truck ~3m^3	hour	0	$97.10	-
12.33	Crawler crane	hour	20	$537.60	10,752
12.34	Tower crane	hour	0	$470.40	-
12.35	Barge	hour	20	$657.22	13,144
12.36	Self-propelled barge	hour	20	$834.62	16,692
12.37	Tug boat	hour	20	$938.11	18,762
12.38	Hydrographic survey launch	hour	20	$486.53	9,731
12.39	Backhoe dregder (incl. barge)	hour	20	$1,300.99	26,020
12.40	Crane barge	hour	20	$1,685.38	33,708
12.41	Pontoon	hour	20	$138.39	2,768
12.42	Road Roller 8 Ton	hour	40	$80.88	3,235
12.43	Grinding Machine	hour	40	$87.41	3,496
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
		SUM total works (US$)			**190,294.28**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 100 : SUMMARY

SENYA BERAKU

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	2,641,773
Bill No. 02 : Surveys and Investigations	149,473
Bill No. 03 : Maritime; Breakwater and Slope Protections	4,025,455
Bill No. 05 : Earth works	751,000
Bill No. 06 : Roads, Pavements and Fencing	144,065
Bill No. 07: Building	469,306
Bill No. 08 : Utility Works - Fresh water supply	29,869
Bill No. 09 : Utility Works - Power supply and ligthing system	58,106
Bill No. 10 : Utility works - Stormwater collection and sewage system	70,289
Bill No. 12 : Day-Works Schedule	190,294
Provisional sum (contingencies)	250,000
Total	**8,779,630**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 01 : General and Preliminary Items — TESHI

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 16,380	16,380
1.02	Insurance of the Works	LS	1	$ 109,196	109,196
1.03	Third-Party Insurance	LS	1	$ 27,299	27,299
1.04	Advance Payment Guarantee	LS	1	$ 21,839	21,839
1.05	Retention Money Guarantee	LS	1	$ 2,730	2,730
				$ -	
	Temporary facilities and equipment.			$ -	
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 350,266	350,266
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	16	$ 3,036	48,570
1.13	Provide and equip Contractor's offices	LS	1	$ 644,489	644,489
1.14	Maintenance Contractor's offices during execution, including services	Mth	16	$ 4,203	67,251
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 46,702	46,702
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 92,431	92,431
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	16	$ 3,152	50,438
				$ -	
	Mobilization & Demobilization			$ -	
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 776,508	776,508
1.22	Preparation / maintenance Access roads	LS	1	$ 140,106	140,106
1.23	Site clearance	LS	1	$ 142,441	142,441
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 5,000	5,000
1.25	Demolition of houses	LS	1	$ 140,106	140,106
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 178,635	178,635
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5,000
				SUM total works (US$)	**2,865,389**

Bill No. 02 : Surveys and Investigations

TESHI

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
2.00	**Pre-construction surveys**				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 22,043	44,087
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 26,011	26,011
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 2,607	2,607
				$ -	
2.10	**Pre- and Post-construction soil investigations**			$ -	
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	2	$ 31,214	62,427
2.12	Post-construction: Boreholes for backfill quaywall	no	3	$ 10,404	31,212
2.13	Soil investigations reclamation (CPT's)	no	5	$ 5,202	26,012
2.14	Soil investigations reclamation (boreholes)	no	2	$ 10,404	20,808
2.15	Laboratory soil tests	LS	1	$ 52,022	52,022
				$ -	
2.20	**Post-construction surveys (after completion of the reclamation, slope protections and breakwater)**			$ -	
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 22,043	22,043
2.22	Topographic post-survey the total project area	LS	1	$ 2,607	2,607
	SUM total works (US$)				**289,835**

Bill No. 03 : Maritime; Breakwater and Slope Protections — TESHI

Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
				Contract Values and Quantities	
	Specific Items				
	Breakwater (Sea-end, behind quay wall part)				
3.02	General (wet) excavation and dredging	m^3	2,500	$ 67.25	168,127
				$ -	
3.11	Quarry Run, 0-40 kg	ton	8,500	$ 114.40	972,405
3.12	Rock, 10-60 kg	ton	4,380	$ 114.40	501,075
3.13	Rock, 60-300 kg	ton	3,440	$ 114.40	393,538
3.14	Rock, 300-1000 kg	ton	3,660	$ 118.54	433,841
3.16	Rock, 2000-5000 kg	ton	7,010	$ 124.75	874,518
3.17	Rock, 3000-6000 kg	ton	4,340	$ 124.75	541,428
				$ -	
	Slope Protection Quay Wall/ rest of South Side			$ -	
3.01	General (dry) Excavation	m^3	200	$ 39.44	7,889
3.02	General (wet) excavation and dredging	m^3	500	$ 67.25	33,625
				$ -	
3.11	Quarry Run, 0-40 kg	ton	6,110	$ 114.40	698,988
3.12	Rock, 10-60 kg	ton	2,630	$ 114.40	300,874
3.13	Rock, 60-300 kg	ton	3,580	$ 114.40	409,554
3.15	Rock, 1000-3000 kg	ton	1,930	$ 124.75	240,773
3.16	Rock, 2000-5000 kg	ton	2,080	$ 124.75	259,486
				$ -	
3.21	Geotextile	m^2	730	$ 20.06	14,646
				$ -	
	Slope Protection Port Area Northern Part			$ -	
3.01	General (dry) Excavation	m^3	200	$ 39.44	7,889
3.02	General (wet) excavation and dredging	m^3	800	$ 67.25	53,801
				$ -	
3.11	Quarry Run, 0-40 kg	ton	2,410	$ 114.40	275,706
3.12	Rock, 10-60 kg	ton	2,030	$ 114.40	232,233
3.13	Rock, 60-300 kg	ton	1,710	$ 114.40	195,625
				$ -	
3.21	Geotextile	m^2	617	$ 20.06	12,379
			SUM total works (US$)		**6,628,399**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 04 : Maritime; Quay Walls **TESHI**

Item No	Description	Unit	Contract Values and Quantities Qty	Unit Rate US$	Amount US$
	Specific Items				
	Southern Quay Wall (2x18x5m)				
4.02	General (wet) excavation and dredging	m^3	1,000	$ 67.25	67,251
				$ -	
4.11	Quarry Run, 0-40 kg	ton	530	$ 153.10	81,146
4.12	Crushed stone for foundation 40-70 mm	ton	280	$ 159.64	44,700
4.13	Back fill (behind blockwall)	ton	1,340	$ 120.41	161,354
4.14	Bed protection: Rock, 10-60 kg	ton	130	$ 153.10	19,904
4.15	Supply, Place crushed stone for crown wall foundation (40-70mm)	ton	18	$ 159.64	2,833
				$ -	
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	200	$ 20.06	4,012
				$ -	
4.31	Blocks in quay wall	m^3	806	$ 1,820.52	1,467,335
				$ -	
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc)	m^3	51	$ 1,319.03	67,600
				$ -	
4.51	R.C. Crown wall; 3.5x0.5x36m (incl. reinf. 135 kg/m^3, dilatation joints ctc 18m, etc.	m^3	63	$ 1,512.09	95,261
				$ -	
4.81	Bollards, 10 ton (including per bollard: embedded anchors and 50kg reinforcement)	No	6	$ 8,266.14	49,597
4.82	Fenders	m	0	$ 2,668.57	-
4.83	Berthing rings	No	18	$ 1,183.12	21,296
			SUM total works (US$)		2,082,290

Bill No. 05 : Earth works

TESHI

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	General excavation and dredging				
3.01	General dry excavation (excl. Rock Blasting), levelling for buildings and pavement	m^3	2,500	$ 39.44	98,609
3.02	General (wet) excavation and dredging (excl. Rock Blasting)	m^3	300	$ 67.25	20,175
3.02	Dredgin of port basin and approach channel (excl. Rock Blasting)	m^3	2,000	$ 67.25	134,502
				$ -	
5.10	Reclamation and fill			$ -	
5.11	General fill (except structural fill), levelling for buildings and pavement	m^3	1,000	$ 47.68	47,675
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1:1)	m^3	0	$ 52.54	-
5.13	Structural fill for asphalt approach road (1m thick+ incl. shoulder width 1.5m)	m^3	2,430	$ 52.54	127,672
5.13	Structural fill for concrete pavement port area (1m thick)	m^3	970	$ 52.54	50,964
5.13	Structural fill for concrete pavement road to quays (1m thick)	m^3	1,200	$ 52.54	63,048
				$ -	
5.20	Rock excavation			$ -	
5.21	Rock removal / blasting wet	m^3	500	$ 165.40	82,702
5.22	Rock removal / blasting dry	m^3	0	$ 87.32	-
		SUM total works (US$)			625,347

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 06 : Roads, Pavements and Fencing — TESHI

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.00	Asphalt roads (AP)				
6.01	Natural gravel sub-base (thickness = 200mm)	m^2	330	$ 26.05	8,595
				$ -	
6.10	Concrete Paving (CP) carriage ways and parking areas			$ -	
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	1,290	$ 130.21	167,972
				$ -	
6.30	Stelcon Sheets (SS)			$ -	
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	108	$ 58.38	6,305
3.21	Geotextile (between sand base and sub-grade)	m^2	488	$ 14.47	7,060
6.32	Stelcon sheets (2000x2000x200mm)	m^2	360	$ 371.96	133,907
				$ -	
6.40	Kerbs			$ -	
6.43	Kerb type 3 (150x150x1000mm), concrete C28/35	m	36	$ 40.65	1,463
	SUM total works (US$)				325,303

Bill No. 07 : Buildings - Main **TESHI**

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.02	**Provisional sum Small Administration Office**	L.S.	1	195,000.00	195,000.00
	Net Mending Shed (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.06	**Provisional sum Small Net Mending Shed**	L.S.	1	202,650.00	202,650.00
	Workshop (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.12	**Provisional sum Small Workshop**	L.S.	1	4,537.50	4,537.50

	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.18	**Provisional sum Small Toilet Block**	L.S.	1	51,156.00	51,156.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	473,843.50

Bill No. 08 : Utility Works - Fresh water supply

TESHI

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	240	$ 161.37	38,729
				SUM total works (US$)	38,729

Bill No. 09 : Utility Works - Power supply and ligthing system TESHI

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	Power supply - lines				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m³/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	460	$ 331.28	152,387
				SUM total works (US$)	152,387

Bill No. 10 : Utility works - Stormwater collection and sewage system TESHI

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.7	Sewage system - pipes and inspection pits				
10.71	Pipe ∅160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	130	$ 145.80	18,954
10.72	Inspection pit	no	3	$ 10,424.32	31,273
		SUM total works (US$)			50,227

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 12 : Day-Works Schedule TESHI

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	200	$4.85	971
12.02	Foreman	hour	60	$8.50	510
12.03	Steel bender / fixer	hour	20	$12.42	248
12.04	Concreter	hour	20	$12.42	248
12.05	Workshop mechanic	hour	40	$12.42	497
12.06	Heavy equipment mechanic	hour	20	$12.42	248
12.07	Welder	hour	20	$12.42	248
12.08	Watchman	hour	20	$6.20	124
12.09	Marine surveyor	hour	20	$13.60	272
12.10	Topographical surveyor	hour	20	$12.42	248
12.11	Diver including equipment	hour	20	$27.81	556
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	40	$110.68	4,427
12.22	Bulldozer, ~350hp	hour	20	$138.35	2,767
12.23	Excavator ~2m^3	hour	40	$225.89	9,036
12.24	Excavator ~4m^3	hour	20	$338.82	6,776
12.25	Wheel loader ~4m^3	hour	40	$225.89	9,036
12.26	Dump truck ~8 ton	hour	40	$76.10	3,044
12.27	Shovel wheel loader ~2m^3	hour	20	$155.97	3,119
12.28	Tractor with scraper ~7m^3	hour	40	$165.58	6,623
12.29	Motor grader ~100hp	hour	40	$110.67	4,427
12.30	Welding equipment	hour	20	$27.68	554
12.31	Concrete mixer ~500ltr	hour	40	$105.65	4,226
12.32	Concrete mixer truck ~3m^3	hour	20	$95.21	1,904
12.33	Crawler crane	hour	20	$537.60	10,752
12.34	Tower crane	hour	20	$470.40	9,408
12.35	Barge	hour	40	$657.22	26,289
12.36	Self-propelled barge	hour	20	$834.62	16,692
12.37	Tug boat	hour	10	$938.11	9,381
12.38	Hydrographic survey launch	hour	20	$486.53	9,731
12.39	Backhoe dregder (incl. barge)	hour	20	$1,300.99	26,020
12.40	Crane barge	hour	20	$1,685.38	33,708
12.41	Pontoon	hour	20	$138.39	2,768
12.42	Road Roller 8 Ton	hour	40	$80.88	3,235
12.43	Grinding Machine	hour	40	$68.86	2,754
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
				SUM total works (US$)	**210,848**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 100 : SUMMARY — TESHI

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	2,865,389
Bill No. 02 : Surveys and Investigations	289,835
Bill No. 03 : Maritime; Breakwater and Slope Protections	6,628,399
Bill No. 04 : Maritime; Quay Walls	2,082,290
Bill No. 05 : Earth works	625,347
Bill No. 06 : Roads, Pavements and Fencing	325,303
Bill No. 07: Building	473,844
Bill No. 08 : Utility Works - Fresh water supply	38,729
Bill No. 09 : Utility Works - Power supply and ligthing system	152,387
Bill No. 10 : Utility works - Stormwater collection and sewage system	50,227
Bill No. 12 : Day-Works Schedule	210,848
Provisional sum (contingencies)	250,000
Total	**13,992,596**

Bill No. 01 : General and Preliminary Items KETA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Bond Guarantee & Insurance				
1.01	Performace Bond/Guarantee	LS	1	$ 25,757	25,757
1.02	Insurance of the Works	LS	1	$ 171,715	171,715
1.03	Third-Party Insurance	LS	1	$ 42,929	42,929
1.04	Advance Payment Guarantee	LS	1	$ 34,343	34,343
1.05	Retention Money Guarantee	LS	1	$ 4,293	4,293
				$ -	
	Temporary facilities and equipment.			$ -	
1.11	Provide and equip Supervisor/ Engineer's offices	LS	1	$ 388,811	388,811
1.12	Maintenance Supervisor/ Engineer's offices during execution, including services	Mth	24	$ 4,437	106,485
1.13	Provide and equip Contractor's offices	LS	1	$ 702,895	702,895
1.14	Maintenance Contractor's offices during execution, including services	Mth	24	$ 5,371	128,903
1.15	Provide for removing all temporary facilities inc. Office for engineer and contractor	LS	1	$ 58,380	58,380
1.16	Provision Supervisor/ Engineer's Vehicles	No	1	$ 92,435	92,435
1.17	Maintenance Supervisor/ Engineer's Vehicles	Mth	24	$ 4,320	103,683
				$ -	
	Mobilization & Demobilization			$ -	
1.21	Mobilization of all plant, equipment, personnel, etc required to complete the works	LS	1	$ 787,425	787,425
1.22	Preparation / maintenance Access roads	LS	1	$ 93,408	93,408
1.23	Site clearance	LS	1	$ 140,112	140,112
1.24	Supportive services to the employer in relocation effort	Prov. Sum	1	$ 10,000	10,000
1.25	Demolition of houses	LS	1	$ 116,760	116,760
1.26	Demobilization of all plant, equipment, personnel, etc	LS	1	$ 295,403	295,403
1.27	Roadside billboard	Prov. Sum	1	$ 5,000	5,000
		SUM total works (US$)			**3,308,736**

Bill No. 02 : Surveys and Investigations

KETA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
2.00	**Pre-construction surveys**				
2.01	Bathymetric surveys of the works area, sheltered port area and approach channels	LS	2	$ 27,544	55,087
2.02	Geophysical survey of the works area, sheltered port area and approach channels	LS	1	$ 26,012	26,012
2.03	Topographic survey at the location of interest of the beach area and the land connection area's	LS	1	$ 9,697	9,697
				$ -	
2.10	**Pre- and Post-construction soil investigations**			$ -	
2.11	Pre-construction: Drilling and sampling surveys for the quay wall	no	3	$ 45,926	137,777
2.12	Post-construction: Boreholes for backfill quaywall	no	6	$ 10,404	62,426
2.13	Soil investigations reclamation (CPT's)	no	9	$ 5,203	46,824
2.14	Soil investigations reclamation (boreholes)	no	2	$ 10,404	20,809
2.15	Laboratory soil tests	LS	1	$ 67,632	67,632
				$ -	
2.20	**Post-construction surveys (after completion of the reclamation, slope protections and breakwater)**			$ -	
2.21	Bathymetric survey of the sheltered port area and the approach channels	LS	1	$ 27,544	27,544
2.22	Topographic post-survey the total project area	LS	1	$ 9,697	9,697
	SUM total works (US$)				463,504

Bill No. 03 : Maritime; Breakwater and Slope Protections KETA

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Breakwater (Sea-end, behind quay wall part)				
3.02	General (wet) excavation and dredging	m^3	4,000	$ 67.25	269,015
				$ -	
3.11	Quarry Run, 0-40 kg	ton	6,510	$ 114.41	744,779
3.12	Rock, 10-60 kg	ton	3,500	$ 114.41	400,419
3.13	Rock, 60-300 kg	ton	1,720	$ 114.41	196,777
3.14	Rock, 300-1000 kg	ton	4,510	$ 118.54	534,618
3.16	Rock, 2000-5000 kg	ton	3,350	$ 124.76	417,940
3.17	Rock, 3000-6000 kg	ton	5,600	$ 124.76	698,645
				$ -	
	Slope Protection Quay Wall (south of quay wall)			$ -	
3.02	General (wet) excavation and dredging	m^3	2,250	$ 67.25	151,321
				$ -	
3.11	Quarry Run, 0-40 kg	ton	9,330	$ 114.41	1,067,402
3.12	Rock, 10-60 kg	ton	2,170	$ 114.41	248,260
3.13	Rock, 60-300 kg	ton	2,960	$ 114.41	338,640
3.15	Rock, 1000-3000 kg	ton	2,660	$ 124.76	331,856
3.16	Rock, 2000-5000 kg	ton	3,020	$ 124.76	376,769
				$ -	
	Little breakwater in north western part			$ -	
3.02	General (wet) excavation and dredging	m^3	270	$ 67.25	18,159
				$ -	
3.11	Quarry Run, 0-40 kg	ton	530	$ 114.41	60,635
3.12	Rock, 10-60 kg	ton	300	$ 114.41	34,322
3.13	Rock, 60-300 kg	ton	360	$ 114.41	41,186
				$ -	
	Land side of breakwater (first XXX m)			$ -	
3.02	General (wet) excavation and dredging	m^3	1,350	$ 67.25	90,793
				$ -	
3.11	Quarry Run, 0-40 kg	ton	4,170	$ 114.41	477,070
3.12	Rock, 10-60 kg	ton	1,930	$ 114.41	220,802
3.13	Rock, 60-300 kg	ton	2,590	$ 114.41	296,310
	SUM total works (US$)				**7,015,716**

Bill No. 04 : Maritime; Quay Walls

KETA

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Northern Quay Wall (2x18x4m; 2x18x5m; 2x18x6m)				
4.02	General (wet) excavation and dredging	m^3	1,500	$ 67.25	100,881
				$ -	
4.11	Quarry Run, 0-40 kg	ton	1,600	$ 153.11	244,978
4.12	Crushed stone for foundation 40-70 mm	ton	780	$ 159.65	124,527
4.13	Back fill (behind blockwall)	ton	4,030	$ 120.42	485,286
4.14	Bed protection: Rock, 10-60 kg	ton	390	$ 153.11	59,713
4.15	Supply, Place crushed stone for crown wall foundation (40-70mm)	ton	53	$ 159.65	8,499
				$ -	
4.21	Geotextile for Transition construction quay wall - breakwater	m^2	200	$ 20.06	4,013
				$ -	
4.31	Blocks in quay wall	m^3	1,890	$ 1,820.59	3,440,915
				$ -	
4.41	R.C. Coping Beam (incl. reinf. 55 kg/m^3, dilatation joints ctc 18m, etc.)	m^3	114	$ 1,319.09	150,046
				$ -	
4.51	R.C. Crown wall; 3.5x0.5x108m (incl. reinf. 135 kg/m^3, dilatation joints ctc 18m, etc.	m^3	189	$ 1,512.15	285,796
				$ -	
4.81	Bollards, 10 ton (including per bollard. embedded anchors and 50kg reinforcement)	No	14	$ 8,266.48	115,731
4.82	Fenders	m	0	$ 2,668.68	-
4.83	Berthing rings	No	42	$ 1,669.67	70,126
			SUM total works (US$)		5,090,511

Bill No. 05 : Earth works

KETA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
5.00	General excavation and dredging				
3.01	General (dry) excavation (excl. Rock Blasting)	m^3	500	$ 39.45	19,723
3.02	General (wet) excavation and dredging (excl. Rock Blasting)	m^3	0	$ 67.25	-
3.02	Dredgin of port basin and approach channel (excl. Rock Blasting)	m^3	100	$ 67.25	6,725
				$ -	
5.10	Reclamation and fill			$ -	
5.11	General fill to (except structural fill for buildings and roads)	m^3	9,100	$ 47.68	433,861
5.12	Structural fill for buildings (2m thick+surrounding stretch of 2m, slope 1:1)	m^3	0	$ 52.54	-
5.13	Structural fill for roads/pavement in port area (1m thick)	m^3	4,400	$ 52.54	231,185
5.13	Structural fill for access roads (refurbishment)	m^3	800	$ 47.68	38,142
	SUM total works (US$)				729,635

Bill No. 06 : Roads, Pavements and Fencing KETA

		Contract Values and Quantities			
Item No.	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
6.10	Concrete Paving (CP) carriage ways and parking areas				
6.11	Natural gravel sub-base (thickness = 200mm)	m^3	1,040	$ 130.22	135,425
				$ -	
6.30	Stelcon Sheets (SS)			$ -	
6.31	Sand base (thickness = 300mm, Proctor value > 98%)	m^3	324	$ 58.38	18,915
3.21	Geotextile (between sand base and sub-grade)	m^2	1,352	$ 14.47	19,561
6.32	Stelcon sheets (2000x2000x200mm)	m^2	1,080	$ 371.98	401,736
				$ -	
6.40	Kerbs			$ -	
6.43	Kerb type 3 (150x150x1000mm), concrete C28/35	m	108	$ 40.65	4,390
				$ -	
6.80	Fencing			$ -	
6.81	Fence, 2.5m high (including poles, terminations, etc.)	m	450	$ 871.22	392,051
6.82	Gates	LS	3	$ 22,510.34	67,531
			SUM total works (US$)		1,039,610

Bill No. 07 : Buildings - Main KETA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
	Administration Office (Small)				
	Concrete foundation slab, founded on improved soil, and a shallow concrete foundation frame				
	Structural frame of concrete columns, aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Concrete floor slabs, staircase, landing and gallery				
	Exterior walls, doors, windows and glazing				
	Interior partition walls, doors				
	Plumbed installation for water distribution				
	Toilets with all the required, sinks, fittings, etc.				
	Waste water collection and discharge				
	Cabling, installations and circuitry for electricity, telecom and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
	Air-conditioning in offices, meeting rooms and first aid (sick-bay)				
7.01	**Provisional sum Small Administration Office**	L.S.	1	195,000.00	195,000.00
	Fish Market				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rinsing water collection and discharge				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.03	**Provisional sum Fish Market**	L.S.	1	121,500.00	121,500.00
	Net Mending Shed (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Entrance by low stairs situated around the building				
	Structural frame of concrete columns and beams				
	Aluminium trusses and wooden purlings				
	Trussed roof structure covered by aluminium plates with all related elements such as guttering				
	Supply and installation of a suitable supply system for rinsing water				
	Rain water collection system connected to the roof and connected to a rain water collection pit				
	Electricity and lighting with the required cabling, fittings etc.				
7.05	**Provisional sum Small Net Mending Shed**	L.S.	1	202,650.00	202,650.00

	Workshop (Large)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings, etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilet with all the required equipment, sink, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.11	**Provisional sum Large Workshop**	L.S.	1	94,687.50	94,687.50
	Toilet Block (Small)				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls and partition wall with a roof structure on top				
	Electricity and lighting with the required cabling, fittings etc.				
	Exterior walls, doors, windows				
	Interior partition walls, doors with all required fittings and finishes				
	Plumbed installation for water distribution				
	Toilets and wash basins with all the required equipment, sinks, fittings, etc.				
	Waste water collection and discharge facilities				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.17	**Provisional sum Small Toilet Block**	L.S.	1	51,156.00	51,156.00
	Power Station				
	Concrete foundation slab founded on improved soil and a shallow concrete foundation frame				
	Structure of walls with a roof structure on top				
	Exterior walls, doors, windows as per the drawings				
	Electricity and lighting with the required cabling, fittings etc.				
	Cabling, installations and circuitry for electricity and lighting with required fuse and circuit breaker boards				
	Suitable lighting system at the required locations				
7.19	**Provisional sum Power Station**	L.S.	1	20,500.00	20,500.00
				SUM total works (US$)	**685,493.50**

Construction of Fishing Ports and Fish Landing Sites (LOT 2)

Bill No. 08 : Utility Works - Fresh water supply

KETA

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
8.00	Water supply - general items				
8.06	Pipe (HDPE PN10) required for distribution in port area (starting from booster station to buildings, overlength 5 & 10m resp.)	m	370	$ 165.89	61,378
	SUM total works (US$)				61,378

Bill No. 09 : Utility Works - Power supply and ligthing system KETA

		Contract Values and Quantities			
Item No	Description	Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
9.00	Power supply - lines				
9.03	LV-line (incl.. Excavation, fill, concrete tiles 0.025m^3/m, warning tape, etc.). Starting from Powerstation to buildings, overlength 5 & 10m resp.	m	580	$ 313.19	181,650
				SUM total works (US$)	181,650

Bill No. 10 : Utility works - Stormwater collection and sewage system

KETA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
10.7	Sewage system - pipes and inspection pits				
10.71	Pipe Ø160mm (PVC), from anticipated location of septic tank to outlet/collection pit	m	180	$ 149.88	26,979
10.72	Inspection pit	no	4	$ 10,716.17	42,865
	SUM total works (US$)				69,843

Bill No. 11 - On-and Off-loading Platform

KETA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
	Specific Items				
11.0	Surveys and soil investigations				
2.01	Bathymetric survey of the works area	LS	1	$ 21,484.74	21,485
2.03	Topographic survey at the location of interest	LS	1	$ 25,781.68	25,782
				$ -	
2.12	Soil investigations for pile driving (CPT's)	no	4	$ 5,832.96	23,332
				$ -	
2.21	Bathymetric post-survey of the works area	LS	1	$ 32,227	32,227
				$ -	
11.1	Earthworks			$ -	
5.11	Sand fill to a level of +2.75 NLD (to facilitate pile driving and construction)	m^3	4,000	$ 58.33	233,318
3.02	Dredging to required water depth (after finalizaton of loading platform), slope 1:3	m^3	4,000	$ 67.20	268,783
4.15	Supply, Place foundation fill for buffer plate	m^3	120	$ 52.50	6,300
3.12	Supply, Place Rock, 10-60 kg (slope protection, 2 layers, ie 0.5m thickness)	ton	345	$ 152.98	52,782
				$ -	
3.21	Geotextile layer (between sand and 10-60kg)	m^2	420	$ 20.05	8,419
				$ -	
11.3	Construction works			$ -	
11.31	Prefab piles vertical (⌀350x350mm, C35/45 prestressed) - 18 piles x 15m	m	270	$ 1,776.62	479,688
11.32	Prefab piles raked (⌀350x350mm, C35/45 prestressed+stirrups Ø8-150mm) - 6 piles x 15m	m	90	$ 2,307.28	207,655
11.33	Deck - 300mm - (R.C. cast in situ, C28/35, reinforcement 100kg/m^3)	m^3	70	$ 1,382.01	96,741
11.33	Beams (⌀350x350mm - (R.C.cast in situ, C28/35, reinforcement 95 kg/m^3,)	m^3	11.2	$ 1,666.28	18,662
11.33	Cornice beams (for fenders and bufferplate) R.C. cast in situ, C28/35, reinforcement 160kg/m^3	m^3	10.8	$ 1,798.33	19,422
11.34	Transition slabs (16x1.5x3.0x0.3m), (R.C C28/35, reinforcement 135 kg/m^3 ,)	m^3	21.6	$ 1,720.85	37,170
				$ -	
11.4	Fender system and bollards			$ -	
11.41	Azobe wooden piles vertical (⌀350x350mm) - 12 piles x 15m	m	180	$ 363.83	65,490
11.42	Azobe beams (100x250mm)	m	68	$ 272.88	18,556
11.43	Fenders UE300 E1.3, L=600mm	no	12	$ 34,699.58	416,395
11.44	Steel plate, anti-slip, (0.5m x 22.5m x 10mm thickness)	m^2	11.5	$ 363.83	4,184
11.45	Bollards (8ton), including anchors and 50kg reinforcement per bollard	no	4	$ 5,574.62	22,298
			SUM total works (US$)		2,058,689

Bill No. 12 : Day-Works Schedule KETA

Item No	Description	Contract Values and Quantities			
		Unit	Qty	Unit Rate US$	Amount US$
				TO BE FILLED IN	
12.00	LABOUR			BY BIDDER	
12.01	Unskilled labour	hour	400	$4.85	1,942
12.02	Foreman	hour	120	$8.50	1,020
12.03	Steel bender / fixer	hour	40	$12.42	497
12.04	Concreter	hour	40	$12.42	497
12.05	Workshop mechanic	hour	80	$12.42	994
12.06	Heavy equipment mechanic	hour	40	$12.42	497
12.07	Welder	hour	40	$12.42	497
12.08	Watchman	hour	40	$6.20	248
12.09	Marine surveyor	hour	40	$13.60	544
12.10	Topographical surveyor	hour	40	$12.42	497
12.11	Diver including equipment	hour	40	$27.81	1,112
12.20	PLANT				
12.21	Bulldozer, ~ 200hp	hour	80	$110.68	8,854
12.22	Bulldozer, ~350hp	hour	40	$138.35	5,534
12.23	Excavator ~2m^3	hour	80	$225.89	18,071
12.24	Excavator ~4m^3	hour	40	$338.82	13,553
12.25	Wheel loader ~4m^3	hour	80	$225.89	18,071
12.26	Dump truck ~8 ton	hour	80	$76.10	6,088
12.27	Shovel wheel loader ~2m^3	hour	40	$155.97	6,239
12.28	Tractor with scraper ~7m^3	hour	80	$165.58	13,247
12.29	Motor grader ~100hp	hour	80	$110.67	8,854
12.30	Welding equipment	hour	40	$27.68	1,107
12.31	Concrete mixer ~500ltr	hour	80	$105.65	8,452
12.32	Concrete mixer truck ~3m^3	hour	40	$95.21	3,808
12.33	Crawler crane	hour	40	$537.60	21,504
12.34	Tower crane	hour	40	$470.40	18,816
12.35	Barge	hour	80	$657.22	52,577
12.36	Self-propelled barge	hour	40	$834.62	33,385
12.37	Tug boat	hour	20	$938.11	18,762
12.38	Hydrographic survey launch	hour	40	$486.53	19,461
12.39	Backhoe dregder (incl. barge)	hour	40	$1,300.99	52,040
12.40	Crane barge	hour	40	$1,685.38	67,415
12.41	Pontoon	hour	40	$138.39	5,536
12.42	Road Roller 8 Ton	hour	80	$80.88	6,470
12.43	Grinding Machine	hour	80	$68.86	5,508
12.44	Pile driver	hour	40	$429.60	17,184
12.60	Rate for standing time for plant expressed as a percentage of the rate for working time			70%	
		SUM total works (US$)			438,880

Bill No. 100 : SUMMARY

KETA

Contract	Amount US$
Bill No. 01 : General and Preliminary Items	3,308,736
Bill No. 02 : Surveys and Investigations	463,504
Bill No. 03 : Maritime; Breakwater and Slope Protections	7,015,716
Bill No. 04 : Maritime; Quay Walls	5,090,511
Bill No. 05 : Earth works	729,635
Bill No. 06 : Roads, Pavements and Fencing	1,039,610
Bill No. 07: Building	685,494
Bill No. 08 : Utility Works - Fresh water supply	61,378
Bill No. 09 : Utility Works - Power supply and ligthing system	181,650
Bill No. 10 : Utility works - Stormwater collection and sewage system	69,843
Bill No. 11 - On-and Off-lcading Platform	2,058,689
Bill No. 12 : Day-Works Schedule	438,880
Provisional sum (contingencies)	750,000
Total	**21,893,647**

LOT 1 GENERAL SUMMARY

Contract	Amount US$
Axim	25,104,561.00
Dixcove	14,671,714.00
Elmina	17,532,712.00
Moree	16,443,762.00
Mumford	20,045,707.00
Winneba	20,210,219.00
GRAND TOTAL	**114,008,675.00**

LOT 2 GENERAL SUMMARY

Contract	Amount US$
Senya Beraku	8,779,630.00
Fete	13,086,097.00
Jamestown	23,746,919.00
Teshi	13,992,596.00
Keta	21,893,647.00
Grand Total	**81,498,889.00**

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10 July, 2012

Director General
Ghana Ports and Harbours Authority Headquarters
P.O.Box 150
Tema, Ghana

Dear Sir,

Development of 11 Coastal Fishing Ports and Fish Landing Sites

Re: Notification of Award of Contract

It refers to your letter DG/CONF/V.138/368, dated 9th July, 2012 with the captioned subject. We are pleased to acknowledge the receipt of the Notification of Award of Contract for Development of 11 Coastal Fishing Ports and Landing Sites

We would like to take this opportunity to thank you to award this contract to us and kindly confirm our acceptance to perform the Contract as per the condition of the Contract.

Best regards.

Yours truly
For China Harbour Engineering Company Limited

YANG TAO
Authorized Representative

GHANA PORTS AND HARBOURS AUTHORITY

HEADQUARTERS

P.O. Box 150
Tema, Ghana
Telephone: (233) 22 - 202683/4
Fax: (233) 22 - 202812
Website: www.ghanaports.gov.gh
Email: headquarters@ghanaports.net

OUR REF: DG/CONF/V.138/365 9TH JULY, 2012

THE MANAGING DIRECTOR
CHINA HARBOUR ENGINEERING CORPORATION (CHEC),
NO. 9 CHUNXIN ROAD. DONGZHIMENWAI,
BEIJING, 100027,
CHINA.

Dear Sir,

NOTIFICATION OF AWARD OF CONTRACT
DEVELOPMENT OF 11 COASTAL FISHING PORTS AND FISH LANDING SITES
CONTRACT NO. GPHA/FLS-CDB-2012/001.2

This is to notify you that following our evaluations and the relevant national approvals, your tender for the **Development of Eleven Coastal Fishing Ports and Fish Landing Sites for the Republic of Ghana,** as corrected and modified in accordance with the Procurement Guidelines, is hereby accepted and on offer by the Ghana Ports and Harbours Authority.

The total contract price of **One Hundred and Ninety-Five Million, Five Hundred and Seven Thousand, Five Hundred and Sixty-Four United States Dollars (US$195,507,564.00)** is hereby accepted for the construction of the **Eleven Coastal Fishing Ports and Fish Landing Sites for the Republic of Ghana.** The Lots 1 and 2, as indicated in earlier communications shall be executed as one project under this contract notification.

Please indicate your acceptance to perform the contract within fourteen (14) days from the date of this letter. Thereafter, you are kindly requested to inspect the Draft Contract Documents at the office of the General Manager - Engineering, Headquarters, Ghana Ports and Harbours Authority and, when appropriate, sign the contract.

Accept our congratulations and we look forward to a successful project delivery.

Yours faithfully,
GHANA PORTS & HARBOURS AUTHORITY

RICHARD A. YANAMOO
By DIRECTOR GENERAL

cc *Director of Port Tema*
Director of Port, Takoradi
GM-Legal, GM-Audit, GM-Finance, GM-Estates & Env. GM-Personnel & Admin.
Procurement Manager, Headquarters
Project Manager, Takoradi.

In case of reply the number and date of this letter should be quoted

Our Ref.: CTRB/GPHA /M.147/APP/2012
Your Ref.:
Tel. No. 0302675029

REPUBLIC OF GHANA

CENTRAL TENDER REVIEW BOARD
MINISTRY OF FINANCE &
ECONOMIC PLANNING
P. O. BOX MB 40
ACCRA

6th July 2012.

DEVELOPMENT OF COASTAL FISH LANDING SITES – LOT 1 & 2

You will recall that your evaluation report was first received on 18th May 2012 and subsequently reviewed by the Board at its 145th sitting on Thursday, 31st May 2012.

2. The Board in a letter dated 1st June 2012 communicated its concerns to your Entity which was responded to in a letter dated 12th June 2012 following which concurrent approval was granted to your Entity to enter into negotiations with **Messrs China Harbour Engineering Corporation Limited (CHEC),** incorporating the listed 'Missing Elements' **as local component element,** to achieve a contract price not exceeding **US$114,008,675.00** for **Lot 1** and **US$81,498,889.00** for **Lot 2.**

3. Your Entity was further advised to report back to the Board on the outcome of the negotiations to enable it grant approval for a firm contract price within a defined scope of Works.

4. At its 147th sitting on Thursday, 14th June 2012, the Board reviewed your negotiation report in a letter N°. DG/CONF.V.138/360 dated 3rd July 2012 and is satisfied.

5. Concurrent approval is hereby granted to the Recommended Tenderer **Messrs China Harbour Engineering Corporation Limited (CHEC)** at a total contract price of **One Hundred and Ninety-Five Million, Five Hundred and Seven Thousand, Five Hundred and Sixty-Four US Dollars (US$195,507,564.00)** for the entire Project, which includes all the specified 'Missing Elements'.

6. You will now proceed with the remaining procurement processes by giving notice of acceptance and signing a procurement contract within the stipulated time periods provided for in Section 65 (1) (2) of Act 663, and keep records for future procurement audit.

7. Failure of your Entity to act in accordance with the above provision shall constitute a breach of the law.

DAVID QUIST
SECRETARY

THE DIRECTOR-GENERAL
GHANA PORTS AND HABOURS AUTHORITY
TEMA

cc: The Hon. Minister, MoFEP
The Hon Deputy Minister (ES), MoFEP
The Hon Deputy Minister (F), MoFEP
Chief Director, MoFEP
Chairman, PPA
Chief Executive. PPA

PAC GPHA-C /EC-11-FLS

GHANA PORTS AND HARBOURS AUTHORITY
HEADQUARTERS
Telephone:
Fax:
Website:
Email:

OUR REF: DG/CONF/V.138/360 JULY 3, 2012

THE CHAIRMAN,
Central Tender Review Board
Ministry of Finance and Economic Planning
Accra.

Dear Sir,

RE: DEVELOPMENT OF COASTAL FISH LANDING SITES

We refer to your letters Ref: CTRB/GPHA.2/M.145/2012 and CTRB/GPHA.1/M.146/2012, both dated 15th June, 2012 for the Coastal Fishing Ports and Fish Landing Sites Lots 1 and 2, respectively. We are grateful for your concurrent approval to negotiate with the recommended contractor, Messrs China Harbour Engineering Corporation (CHEC), for the works.

Having conducted the negotiations on 27th June, 2012 at the offices of the Ghana Ports and Harbours Authority (GPHA) Headquarters, the parties, GPHA and CHEC, have agreed as follows:

1. The works described under Lot 1 shall be completed at a contract price of One Hundred and Fourteen Million, Eight Thousand, Six Hundred and Seventy-Five United States Dollars (US$114,008,675.00).

2. The works described under Lot 2 shall be completed at a contract price of Eighty-One Million, Four Hundred and Ninety-Eight Thousand, Eight Hundred and Eighty-Nine United States Dollars (US$81,498,889.00).

3. The total works shall include all the earlier-determined 'missing items' which are also now included in the negotiated contract sums. Local component elements for each of the fishing ports / landing sites shall be expended on the advice of the Employer's Engineer and the approval of the Employer, especially in the case of the now-included 'missing items'.

4. For the purposes of efficient project management and contract administration, the parties, subject to your concurrence, shall enter into a single contract which would cover all the works earlier described under Lots 1 and 2. The total contract sum shall therefore be One Hundred and Ninety-Five Million, Five Hundred and Seven Thousand, Five Hundred and Sixty-Four United States Dollars (US$195,507,564.00). The cost of supervision of all the works, already contracted at Seven Million, Four Hundred and Fifty Thousand

Dollars would afford the entire project construction and supervision to be completed within the allocated budget under the CDE facility.

5. Day Works rates shall only be expended as and when absolutely necessary with the approval of the Employer's Engineer. Under all such circumstances, local labour and equipment shall be employed for cost-effective delivery of the works.

We kindly request your concurrence to issue the Contract Award Notice for the related works to commence.

Yours faithfully,
GHANA PORTS AND HARBOURS AUTHORITY

RICHARD A-YANAMOO
Ag. DIRECTOR GENERAL

cc. Hon. Minister, MoFEP
Chief Director, MoFEP
Chairman, PPA

GHANA PORTS AND HARBOURS AUTHORITY

HEADQUARTERS

P.O. Box 150
Tema, Ghana
Telephone: (233) 22 - 202631-9
Fax: (233) 22 - 202812
Website: www.ghanaports.gov.gh
Email: headquaters@ghanaports.net

OUR REF: GM/ENG/HQ/85

18TH APRIL, 2012

TO: ALL BIDDERS

Dear Sirs,

RE: REQUEST FOR CLARIFICATIONS
CONSTRUCTION OF COASTAL FISHING PORTS AND FISH LANDING SITES

ADDENDUM 1

This is in response to a set of Request for Clarifications, received from bidders, regarding the on-going bids for the Construction of Coastal Fishing Ports and Fish Landing Sites.

Please find enclosed our responses to the queries. In the event that there are further responses or clarifications from the Employer, you would be notified accordingly.

The Employer's responses herein shall constitute Addendum 1 to the Bidding Documents for both Lot 1 and Lot 2 of the works.

Yours faithfully,
GHANA PORTS & HARBOURS AUTHORITY

ALHAJI HUSEINI SULEIMAN
GM – ENGINEERING

Enc.

cc. Hon. Minister, MOT
Hon. Minister, MOFA
Procurement Manager, GPHA, Hqtrs.

<table>
<tr><th>Item</th><th>Clause Ref. / Title</th><th>Tender Specification Requirement</th><th>Questions / Comments / Specific Clarification Request</th><th>Employer's Response / Additional Information</th></tr>
<tr><td>1</td><td>Volume 4 - Drawings (LOT 1) C4.D1~C4.D4, Marine Works</td><td>loading platform are shown in drawings C4.D1~C4.D4</td><td>Drawings of C4.D1~C4.D4 shows that there are loading platforms, but relevant quantities could not be found in any Bill of Quantities.</td><td>The "loading platform" is part of the structures at some of the sites, e.g. Ada and Keta. As indicated in the technical specifications and descriptions, the 'exact locations would be determined in consultation with the Engineer and local representatives' of the various sites.</td></tr>
<tr><td>2</td><td>VOLUME 2 - Part 1 General technical Specifications D1 (LOT 1) 13.2.3 Earth Works</td><td>average cone resistance (dry and wet fill, reference CPT)
0-2.5m > 4 MPa
2.5-5m > 8 MPa
5-10m >10 MPa
> 10m >15 MPa</td><td>The sand requirement of the specification is the friction angle >27.5, if the sand friction take the lower limit, according our experiences, after vibration, the cone tip resistance of >5m greater than 8MPa is reasonable, and don't affect the use, so could the average cone resistance be adjusted?</td><td>Deferred. Cone resistance shall NOT be adjusted. Any considerations shall be subject the Engineer's site-specific requirements.</td></tr>
<tr><td>3</td><td>VOLUME 2 - Part 1 General technical Specifications D1 (LOT 1) 13.5.1</td><td>In any case, the Contractor shall take measures to ensure that the post-construction settlements do not exceed 0.15m over the first 30 years after construction completion.</td><td>There is no borehole to show the soil under the seabed, but we think the settlement is strict, there is no requirements in BS or EN, according to (Technical Code of Road and Stockyard Pavement for the Port Area) JTJ296-96 published by The Ministry of communications of the People's Republic of China, the allowable residual settlement as follows: Table 3.2.3
<table>
<tr><th>Pavement Type</th><th>concrete</th><th>Asphalt</th><th>interlock</th></tr>
<tr><td>residual settlement</td><td>30cm</td><td>40cm</td><td>50cm</td></tr>
</table>
We think that the uniform residual settlement of 0.25m is reasonable, so could the residual settlement be adjusted?</td><td>The residual settlement allowed shall NOT be adjusted.</td></tr>
<tr><td>4</td><td>Volume 2 Part 1 10.1, General</td><td>• positioning of the test locations with an acceptable degree of accuracy (horizontal +/- 0.01 m, vertical +/- 0.005m)
• water depth measurement at the test locations with an acceptable degree of accuracy (+/ 0.005m)</td><td rowspan="2">The accuracy requirement is very high. Is this the BS standard request or the project request? Usually survey and soil investigation do not need such high precision, whether could accuracy requirement be suitable to be lowered?</td><td rowspan="2">These are the Employer's design requirements. Successful Bidders must be ready to achieve all accuracy requirements.</td></tr>
<tr><td>5</td><td>Volume 2 Part 1, 10.2.2.; Temporary bench marks</td><td>The Contractor shall express the level of any temporary benchmark to be used in survey of the Works relative to the "bench mark(s)' as defined in Paragraph 1.8 of this</td></tr>
</table>

Item	Clause Ref. / Title	Tender Specification Requirement	Questions / Comments / Specific Clarification Request	Employer's Response / Additional Information
		document and shall establish additional benchmarks such that no level is transferred more than one kilometre without being tied in to an approved benchmark. Benchmarks shall be numbered and their establishment shall be to the approval of the Engineer. Levels shall be transferred and ascribed to benchmarks with an accuracy of five times the square root of k(mm) where k is the length in km of the levelling circuit. Benchmark positions shall be determined to within an accuracy of 1 in 4000 of the length of the levelling circuit.		
6	Volume 2 Part 1, 10.3.5; Soil investigation	The positions of the exploration point locations shall be determined with accuracy of +/- 0.01 m in the horizontal plane.	The accuracy requirement is very high. Is this the BS standard request or the project request? Usually survey and soil investigation do not need such high precision, whether could accuracy requirement be suitable to be lowered?	These are the Employer's design requirements. Successful Bidders must be ready to achieve all accuracy requirements.
7	Volume 2 Part 1, 10.8.5; Drilling and sampling requirements	The Contractor shall accurately measure the elevations at all points in the boreholes and field tests with a vertical accuracy of +/- 0.005m. All such elevations shall be referred to NLD.		
8	Volume 2 Part 1, 10.8.7; Bathymetric surveying	• 5 m for the zone designated for detailed survey mapping, and • 25m for the zone designated for general survey mapping. • 15 m for the zone designated for detailed survey mapping, and • 30 m for the zone designated for general survey mapping. The approach channel locations shall be surveyed each along at least 5 axis's at a mean distance of 10 m to each other. The position of the grid points shall be determined with an accuracy of +/- 0.01 m.		
9	Volume 2 Part 1, 10.3.4; Geophysical survey	As part of the geophysical survey, boreholes shall carried out to calibrate the survey results. These boreholes shall further be referred to as calibration boreholes. It is anticipated that the number of calibration	Whether was cost of these calibration boreholes included in Geophysical survey item in the bills?	These are defined in the Bills of Quantities. Also the specifications shall be read in conjunction with the Bills of Quantities.

Item	Clause Ref. / Title	Tender Specification Requirement	Questions / Comments / Specific Clarification Request	Employer's Response / Additional Information
		boreholes shall not be more than three (3). These boreholes shall meet the requirements given in Clause 10.3.5 of this Volume		
10	Volume 2 Part 1; 10.7.3; Schedule and depths of boreholes and field tests	Table 10-3 Density and depths of exploration points.	If the materials in reclamation area are gravel, cobbles, boulders or very compacted sand and clay, CPT is not direct suitable to be adopted. It is recommended that the other test like SPT should be used to check effect of reclamation area.	Deferred.
11	Volume 2 Part 1; 10.8.9, Cone penetration testing (CPT).	The pore pressure shall be measured at the cylindrical extension of the cone, immediately behind the base of the tip (shoulder mounted filter). This may be subject to modification depending on the encountered soil conditions.	In our previous projects, the pore pressure was only measured at the cylindrical extension of the cone, which indicates pore pressure U2. And according to international experience, it is recommended to measure U2 for easy saturation, good stratigraphic detail, good dissipation data and correct location to determine qt. So we suggest only measure U2 is enough for your project purpose.	The requirement is clear. Bidder's suggestion is suppressed.
12	Volume 2 Part 1; 10.8.10; Laboratory testing"	Methylene blue analyses	Would you mind telling us the reason that methylene blue analyses should be done. We seldomly use the result on methylene blue analyses.	Methylene Blue Testing is a standard ASTM method with a wide variation of applications in soils and construction materials for engineering works. If the Employer so stipulates, it shall be used where applicable.
13	VOLUME 3: Bills of Quantities – 1; General	The Bill of Quantities shall be read in conjunction with the various other contract documents such as the General and Particular Conditions of the Contract, the Technical Specifications and Drawings, and the Contractor shall be deemed to have thoroughly acquainted himself with the detailed descriptions of the works to be done and the way in which they are to be carried out.	No Particular Conditions of the Contract is found in the tender documents. Lease clarified weather there is particular condition or not, if there is please provide it.	The Particular Conditions of Contract shall be relevant to the Contractor.
14	"VOLUME 2 - Part 1 General technical specifications; 1.3.3, Borrow Areas	The Employer shall specify which Borrow Areas may be used for the Works by the Contractor... The Engineer may indicate alternative Borrow Areas during the execution of the Works."	To facilitate the preparation of bidding documents can you specify now which borrow areas the Contractor will use for the specific fishing port? And which alternative Borrow Areas the Engineer may indicate during the execution of the Works?	Bidders may consider that borrow pits are not more than 50km from the respective sites.
15	VOLUME 2 - Part 1 General technical Specifications; Clause1 .3.4; Disposal Areas	Disposal Areas shall be designated by the Employer	For better preparation of bidding documents and quotation can you tell us the exact location of the disposal areas for both dredged and excavated materials for each fishing port?	The Employer's Engineer would confirm safe dump sites which are not expected to be beyond 20km from the respective sites.

Item	Clause Ref. / Title	Tender Specification Requirement	Questions / Comments / Specific Clarification Request	Employer's Response / Additional Information
16	Volume 0 - NOTICE TO PROSPECTIVE TENDERERS APPENDIX 3- Performance Bond	10% (Demand Guarantee) and 30% (Performance Bond) of Accepted Contract amount in the currencies and proportions in which the contract price is payable	The percentage of Performance Bond in Appendix to Letter of Tender is on the high side. For better quotation can it be possible to reduce it from 30% to 10%, the same percentage as the Demand Guarantee? Can the Performance Bond, the Advance Payment Guarantee and relevant insurance for a lot be issued by a reputable Chinese bank?	The Performance Security should either be 10% (in the case of a Guarantee) OR 30% (in the case of an insurance Bond), and not both. All other percentages for Bonds and/or Guarantees remain unchanged.
17	VOLUME 2 - Part 1 General technical Specifications APPENDIX 1 – Engineer's Office		We intend to complete the fishing ports one by one. For better quotation can it be possible to provide one Engineer's Office together with equipment and stationery and relocate it after completion of each fishing port until the last one?	The preferred method of execution may not have been stated in the Bidding Documents. However, the bidder's intention shall not be acceptable to the Employer.
18	VOLUME 2 - Part 1 General technical specifications - Site laboratory		To save the cost for site laboratory, we intend to set up one site laboratory and move it to the next construction site after finish of the first one until the last one. Please advice whether it is allowed or not?	This is NOT allowed. The engineer, in consultation with the Employer may permit the establishment of a common laboratory for multiple sites.
19	VOLUME 1 –CONDITIONS OF CONTRACT Provisional sum		The provisional sum for each fishing port seems insufficient. If it exceeds, can it be covered by the Employer?	These are "Provisional Sums" details of which should not be established at the time of bidding.
20	VOLUME 2 - Part 1 technical specifications 11.1.2; General Land for temporary facilities	The Employer shall make available the sites required for the permanent facilities Works as well as the required compound areas for storage, site offices, Workshops, concrete preparation, batching, electricity generation plant, medical and first-aid etc. The Contractor shall fence those areas.	Pleas confirm that the land for temporary facilities, such as site offices, laboratory, precasting yard, workshop, storage area , camp and so on, shall be provided by the Employer free of charge.	These lands, where available shall be negotiated for on behalf of the successful contractor at the respective sites. In any case, the prevailing land use regulations shall strictly be applied.
21	Volume 0 - NOTICE TO PROSPECTIVE TENDERERS	Validity of Tender	Validity of Tender is not specificated in the NOTICE TO PROSPECTIVE TENDERERS, Please clarify it.	Bids shall be valid for at least 119 days from the date of Bid Opening; OR up to the end of 24th August, 2012, whichever is later.
22		Maintenance of dredging work	Usually the maintenance of dredging work is not included in the Defects Notification Period. Please clarify it.	Once the post-dredging survey is carried out and certified by the Engineer there will not be the need for maintenance.
23		Demolition of houses and structure	Please clarify whether the demolition of houses and structure for each fishing port is the responsibility of the Employer. If not, which houses and structure shall be demolished and what are the requirements?	These are site-specific. The Engineer would coordinate these concerns as and when they are encountered.

Item	Clause Ref. / Title	Tender Specification Requirement	Questions / Comments / Specific Clarification Request	Employer's Response / Additional Information
24		others	Pleas kindly provided the provision of the conditions of wave, wind, current and navigation facilities of each port and environment impact assessment nearby.	These, if necessary, would be provided only to the successful bidders / Contractor(s).
25		Tax	Please kindly clarify what kind of tax we need to pay for the project and the rate for those tax.	All local taxes shall apply until otherwise instructed. Tax exemption issues are left to the contractor, if the contractor so desires, and the relevant exemption / clearance authority, if such an application merits attention. GPHA does not offer tax exemptions.
26	Refer to the Tender documents volume 3 "Bills of Quantities" of the above Project, there are few questions need to be clarified. Both of the items 4.31 "Blocks in quay wall" and 6.31 "Stelcon sheets" in Lot 1 & Lot 2 refers to the concrete slabs/blocks without specific containing, therefore we are intended to know whether the concrete slabs/blocks are required to contain steels, if so, please list the quantities of both Lot 1 & Lot 2 for us.			The drawings indicate the dimensions and reinforcement schedules for these items. 'Stelcon' sheets, as described in the general and specific specifications, are pre-cast concrete slabs, 200mm thick and capped with angle sections at the edges. Obviously, these angle sections would have to be held-in by welded nominal reinforcement.
27	**Benchmark:** Would the Employer provide the original Benchmark to the Contractor? How about the distances from the original points to each site?			The Engineer would provide / confirm all necessary survey data and benchmarks for the works.
28	**Tax:** Would the exemption of the import tax I customer duty be obtained by the Contractor for permanent works?			All local taxes shall apply until otherwise instructed. Tax exemption issues are left to the contractor, if the contractor so desires, and the relevant exemption / clearance authority, if such an application merits attention. GPHA does not offer tax exemptions.
29	In Volume 0: Notice to Prospective Tenderers, in the Appendix 3, Item "Performance Amount of Performance security", its data showing that 10% of accepted Contract Amount in the currencies and proportions in which the contract price is payable", we have confusion with the data and need further confirmation of the 10% (Demand Guarantee) and 30%(Performance Bond)			The Performance Security should either be 10% (in the case of a Guarantee) OR 30% (in the case of an insurance Bond), and not both. All other percentages for Bonds and/or Guarantees remain unchanged.
30	Number of Copies of Bids			Bidders are expected to present, for each Lot, **ONE Original** and **THREE Copies** of Bids.

1. SPECIFICATIONS (GENERAL AND PARTICULAR)
2. DRAWINGS
3. PREAMBLE TO BILLS OF QUANTITIES
4. BILLS OF QUANTITIES

ON CD ROM