



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

BRANCH: INFRASTRUCTURE MANAGEMENT

CD: WATER RESOURCES INFRASTRUCTURE OPERATIONS AND MANAGEMENT

D: OPERATIONS EASTERN

SUB-DIRECTORATE: TECHNICAL SUPPORT SERVICES (TSS)

TECHNICAL SPECIFICATION

**HLUHLUWE RIVER GWS: HLUHLUWE DAM: SUPPLY, DELIVERY, INSTALLATION AND MAINTENANCE OF
SECURITY FENCING AT HLUHLUWE DAM**

MAY 2023

REF NO: EO-MMD-C-06 2023/24

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TECHNICAL SPECIFICATIONS

SUPPLY, DELIVERY, AND INSTALLATION OF SECURITY FENCING AT HLUHLUWE DAM

1 INTRODUCTION

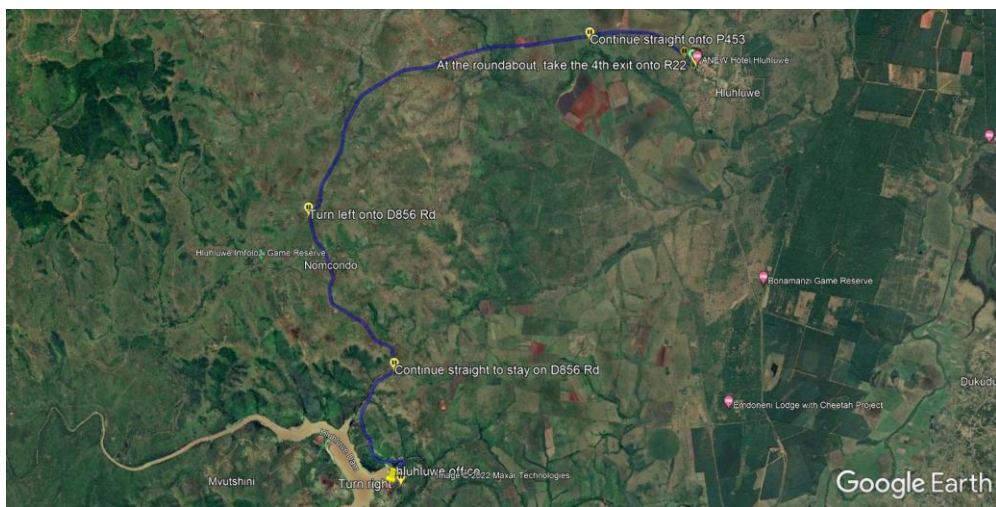
1.1 General background information

Hluhluwe Dam is located on the Hluhluwe river approximately 15km south-west of the town of Hluhluwe in KwaZulu-Natal province. The catchment is medium sized (723km²), and the primary purpose of the dam is to provide storage for irrigation, industrial and domestic use. The dam wall is 37m high and is classified as large. The dam was designed and constructed by DWAf and completed in 1965. The dam is owned by the Department of water and sanitation.

Coordinates of the dam - Latitude:28°07'18.21"S Longitude:32°10'46.15"E

1.2 Directions to the dam

Directions to the dam wall: On the N2 approaching North or South, offramp onto road D123 and head west until it transitions to D856, travel for approximately 15.5 km and arrive at the Hluhluwe dam wall.



1.3 Fencing requirements at the Dam

1.3.1 Fencing from Quarry to Boundary Fence outside Water Control Office



A total length of 345m needs to be fenced from the quarry to the 2,4m security fence outside the WCO / Office area.

Pictures of the start of fencing, installation of gate, corner post and end of fence follows:



Start of Fencing – concrete corner post around the quarry



Droppers from old fence



Path of fence



Iron peg for corner post



Point where new fence to join existing fence

1.3.2 Extending fencing on the Upstream Left Bank



Dam wall left bank easily accessible by livestock and community



Figure above: yellow line depicts length of fence to be extended by 20m



	Turnstile specs: Full height, 4-arm, single turnstile Required opening size: 1,43m wide x 2,25m high Bi-directional suitable for internal and external installations Key override for free rotation. Works with all access control and time & attendance systems. Supplied in broken-down form on a pallet – Pallet dimensions: 2,2m long x 1,1m wide x 1,1m high. Weight 180kg. Straightforward assembly. 5-year mechanical guarantee. 1-year electrical guarantee. Price to include installation/delivery
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1.4

Maintenance to be carried out on existing fencing:



Start of fencing repair on right bank, New fencing from vertical pole



End of fencing repair on left bank. Total repair =57m on right bank, includes new fencing, y-standards, foundation and poles.



Start of fencing at pole 9m from bridge on left bank, New fencing from pole in picture



End of fencing at Steel standard on Bridge. Total fencing on left bank 9m new fencing after installation of single leaf pedestrian gate, y-standards and poles to be installed.

2. SCOPE OF WORK

Supply, deliver and install fencing according to drawings and specifications.

APPLICATION OF CLAUSES

2.01 PRECEDENCE OF THESE CLAUSES

The clauses contained in this section are intended to amplify the rest of the conditions contained in this tender document, and in certain instances to modify the contents. Should any discrepancy appear between these clauses and the rest of the conditions these clauses should take precedence?

2.02 EXTENT OF THE CONTRACT

This contract **comprises** the supply of all material and labour for the erection and completion of Fencing around Hluhluwe Dam, Kwa Zulu Natal Province.

2.03 RESPONSIBILITIES

The extent of the contract as given above is intended to indicate the **general extent of the works** involved. It is not exhaustive in so far as any detailed item or associated work is concerned and shall **in no way relieve** the contractor of his responsibilities to comply with the specific requirements.

2.04 SEQUENCE OF WORK

The successful contractor shall be expected to complete the contract within the time stipulated by him in the appendix to the Bid Form keeping in mind the Employer's target for completion when calculating his own proposed Contract Period. The sequence of work shall be determined by the Contractor and compiled in a works programme.

2.05 CONSTRUCTION SITE

The construction sites are located near the Water and Sanitation offices at Hluhluwe Dam and includes left bank fencing extension.

2.06 NATURE OF GROUND AND SUBSOIL CONDITIONS

Not applicable

2.07 TEMPORARY BUILDINGS AND SERVICES

The contractor must make his **own arrangements** in connection with the following, the costs for which must be included in the "Preliminary and General" section, maintain it in a tidy and proper manner and adopt such precautions to prevent any pollution whatsoever.

- (a) Temporary accommodation and toilet facilities for all workers.
- (b) Temporary site offices and/or workshops.

The Department will supply a connection point within reasonable distance from the construction site for the following services:

- (a) **Drinking and construction water**

The contract includes work at site where water is available of which the contractor may use, for construction purposes, free of charge. The Department reserves the right to limit the consumption before any connection or extension of the supply is made, which must be carried out at the contractor's expense and must be made good on completion of the contract. Under no circumstances may water be obtained from fire hydrants or fire hoses.

2.08 CO-OPERATION BETWEEN CONTRACTORS/SUBCONTRACTORS

It is essential that contractors/subcontractors work **in co-operation** with each other. Differences arising should be settled by the contractors themselves and the employer will not be liable for any damage or loss arising from such differences.

2.09 PROCEDURE OF WORK

The Department's personnel, during this contract are situated on site in existing offices. The works on this contract shall be carried out according to program in such a manner as to cause **the least inconvenience** to Departmental personnel. The contractor shall co-ordinate with the employer's local representative on which part of the work to be expedited requires priority.

2.10 SITE CLEARING AND LEVELLING

Clearing and levelling of the site after completion will be under strict supervision of the employer in terms of preserving the existing ecology. The site shall be levelled with the ground sloping away from the fencing. **No trees, shrubs or plants shall be removed without the written permission of the Engineer.**

2.11 ADMISSION TO SITE

Permission for admission to and establishment on site:
Before the successful bidder (contractor) establishes himself on the site, the **local appointed Resident Engineer's** (1.19.1) prior approval must be obtained.

2.12 INSURANCE

The contractor shall enter a policy of insurance **to cover his liability** under the laws in force relating to the workman's compensation and liability to the public and shall produce proof of such insurance having been affected by him.

The contractor shall indemnify the Department of Water and Sanitation from all claims due to accidents to workmen and the public during the execution of this contract.

2.13 CHECKING OF BID DOCUMENTS

On receipt of the bid documents, the tenderer must, prior to submitting his tender, **check all the bid documents** and should **any difference or discrepancy** between or in the drawings and specifications be detected by the

bidder, he shall seek in writing a decision, from the Director/Acting Director: Civil Engineering, Department of Water and Sanitation, Private Bag X313, Pretoria, 0001, on the true intent and meaning of the bid documents as the Department of Water and Sanitation **cannot be held liable** for the additional cost of extra work that may be caused as a result thereof.

2.14 SCOPE OF BID PRICE

The bid price and all prices and/or prices which are inserted into the price schedules in the specification and transferred to the tender form, must be for the execution and completion of the works as well as for the provision of all labour, materials, workmanship, machinery, plant, and everything that is or may become necessary.

2.15 VALUE ADDED TAX

The tender price shall **include value added tax** payable in terms of the Sales Tax Act No. 103 of 1978, as amended.

2.16 PURCHASING OF MATERIALS

- ♦ The contractor is required to purchase the materials necessary for the contract soon thus limiting the effect of inflation and to prevent delays.
- ♦ Payment for materials will only be affected if the contractor **can prove ownership** of the items and if the material **has been delivered to site**.
- ♦ The contractor will be **responsible for the security** and maintenance of all materials in storage on site or at any other place of the contractor's choice.
- ♦ The contractor will be required at his own expense to **make all arrangements for off-loading** and carefully stacking all materials delivered under this contract at the site of the works. The off-loading and stacking shall be carried out strictly in accordance with the requirements of the engineer so as to permit a thorough and careful examination and testing of all items for breakages, failures, etc. and any routine maintenance during storage.
- ♦ The contractor shall be fully responsible for the protection of all materials delivered by him to site but still in storage, against damage by water, weather, fire, and any other interference until such time as it is erected and installed, put into satisfactory operation, and accepted by the employer as complete.

2.17 PAYMENTS

2.17.1 Progress payment

- (a) **This is a bulk pricing bid.** The price for the buildings, items B1 and B2 in the schedule of quantities include all work according to the drawings and specifications to erect the fencing complete but excludes work specified under Section C and D of the schedule of quantities and which should be priced separately. Most of the items under Section C and D are measurable after construction or provisional items.
- (b) **Monthly part payments** will be made in accordance with the percentage tabulated below as a guide for the work completed on the building. The Engineer will decide in collaboration with the Contractor on the final allowable percentage to be paid for each interim payment.
- (c) The supervising Engineer (Civil Design) in collaboration with the Contractor will do the payment certificate. Payment will be made by the administration and financial section of Midmar Dam Departmental personnel.
- (d) Each interim payment certificate shall be subjected to retention by the Employer of 10% of the total work done to date. The retention will be reduced to 5% at the completion of the works (completion certificate), which will then be paid at the issuing of the Final Certificate at the end of the maintenance period. No limit will be applicable on the amount of the retention money.

Subsection of contract	Percentage of total cost
Site clearing and establishment	5.0
Marking / pegging out	5.0
Excavation of foundation for all fencing Posts	5.0
Delivering and storage of material on site	45
Installation of Fencing posts	5
Installation of Corner posts	5

Installation of Gate posts	5
Installation of Fence	5
Installation of Gates	5
Installation of Barbed razor wire	5
Tidy Site	10
Total	100

- 2.17.2 Payment of provisional items will be made as separate items in the schedule of quantities with reference to procedure and method as stated here under:
Method of payment shall be done according to clause 11 as stipulated in the "Special Conditions of Contract".
- 2.17.3 **Payment of preliminary and general items** will be made in accordance with clauses 8.2.1 and 8.2.2 of SANS specification 1200A.
- 2.17.4 The contractor shall provide all **reasonable assistance** in the preparation of cash flow statements for certificate payments required by the employer.
Such statements shall be based on the programme for the execution of the works and shall be updated at such intervals, as the programme of work progress is required to be updated. The co-operation of the contractor under these items shall in no way prejudice his right to receive payment in terms of the contract.
- 1.17.5 The Contractor can claim payment of 80% of the value of material for the contract, purchased by him and delivered to site, but not yet built in on his interim payment certificate. The Contractor must provide the Engineer with documentation proving his ownership of such material.
- 1.17.6 The Bidder shall complete the Daywork Schedule on which basis he will be paid for the execution of extra work as described in the preamble of the schedule. If an item was not included in this schedule, the contractor will be paid for that item according to **clause 40** in the "General Conditions of Contract for Works of Civil Engineering Construction", sixth edition (1990), with specific reference to **sub-clause (4) (a)**.

1.18 GENERAL

- 1.18.1 Throughout this document the following shall apply:

- (a) **Employer** shall mean the Minister of Water and Sanitation, acting on behalf of the Government of the Republic of South Africa or his duly authorized representative.
- (b) **Engineer** shall mean the Director-General of the Department of Water and Sanitation or his duly authorized representative. Refer to "Instructions to Tenderers" Clause 2.
- (c) Address of **Employer** at Head Office:

Director General
Department of Water and Sanitation
Private Bag X313
PRETORIA
0001
Tel.: (012) 336-8680

- (c) **Address of local resident engineer on site: (Mr. N. Punchum)**
Resident Engineer
Department of Water and Sanitation
Private Bag X24
HOWICK
3290 **Tel.: (033) 239-1266**

The Contractor will be an active participant in the **preservation of the environment** and will be required to maintain and contribute towards the safekeeping of the environment. The contract shall regularly or at the Engineer's instructions, **clean and clear away** all rubbish and excess materials as the works proceed.

- 1.18.1 The Contractor shall be responsible **for the protection** and safety of the premises **against fire** and shall take such precautions as may be directed by the representative of the Department.

- 1.18.2 **No wood or plant life** will be harvested from the building site or surrounding area.
- 1.18.3 The contractor shall **not extend** his operations **beyond the defined area** of the works.
- 1.18.4 The area used by the Contractor will be made good to the engineer's satisfaction, at completion of the works.
- 1.18.5 Any **relics, treasure** or other articles of value **found** on the site shall remain the property of the employer and shall be handed to the Engineer who shall be the sole arbiter of what constitutes an article of value.
- 1.18.6 **Meetings** related to the progress and other detail of the contract of the works will be held at regular intervals and at such other times as may be necessary, attended by the following:
- (a) The Engineer
 - (b) The Contractor's representative/s
 - (c) The employer's local representative
- Subcontractors shall not be present at progress meetings unless specifically requested by the contractor or Engineer.
- The Engineer shall record the minutes of the meeting and distribute them to all affected parties.
- 1.18.7 The Contractor shall **acquaint himself** during the pre-tender site meeting with the conditions under which the works are to be done and personally examine the means of access to works, the condition of the roads and generally of all matters which may influence the execution of this contract.
- 1.18.8 **Health and Safety**
All activities on the construction site, work related or otherwise, regarding this Contract _____-WTE and/or where the successful Contractor's involvement is applicable during the execution of this contract for the full period of the works, shall comply fully to the Occupational Health and Safety Act (Act No. 85 of 1993) and all its regulations with regards to the safety and wellbeing of applicable individuals and the prevention of damage to the environment. The Contractor shall **provide first aid** facilities complying with the requirements of the **Occupational Health and Safety Act (Act No. 85 of 1993)** and shall adhere to all rules and regulations of the mentioned act. Any death or injury that may occur directly or indirectly due to the actions of this contract shall be solely the responsibility of the contractor and the Department of Water and Sanitation will not be liable for the consequences.

1.19 COMMENCEMENT AND WORKS PROGRAMME

Commencement date of the works and hence the contract period shall be taken as the date of official site handover to the Contractor. The Contractor can commence work directly after receiving his letter of acceptance but at his own risk and only on approval of the Engineer.

Within 14 days of award of contract, the contractor **shall submit** a detailed comprehensive and realistic **works programme** reflecting all activities required up to final completion.

The format of the programme shall be to the engineer's approval. The programme so submitted and approved shall be held to the binding throughout the contract period.

The tender price shall be computed on the assumption that **all the material necessary** for the execution of this contract will **be readily available** when required in accordance with the programme for the works. The contractor shall use every reasonable endeavor to obtain supplies of all materials timeously.

1.20 LEAVE PERFECT

On the **completion** of the works the contractor shall **clear away and remove** from the site all construction plant, surplus materials, rubbish, and temporary works of any kind and leave the whole of the site and the works clean and in an efficient condition to the satisfaction of the engineer. The contractor shall also satisfy the engineer that he has complied with the conditions of any wayleaves, which the contractor has negotiated.

1.21 CONTRACT PRICE - ADJUSTMENT PROVISIONS

The general rule stipulates that:

- (a) If the contract term (the period or term of completion) is 6 months or shorter, the contract price Irrespective of the amount involved shall be fixed and NO price adjustments shall be considered.
- (b) In respect of all contracts amounting to R500 000, 00 and less for buildings or building related contracts, the contract price shall be fixed irrespective of the contract term.
- (c) The stipulations concerning contract price adjustments shall be applicable only to building contracts to the value of more than R500 000, 00 and of which the contract terms are longer than 6 months.

Notwithstanding Clause 1.21 (a), (b) and (c) above:

No price adjustments shall be applicable on this contract and all bid rates or tariffs will be firm for the duration of the contract. The contractor shall compensate for any fluctuation of material or labour in his bid price.

INSPECTIONS DURING THE CONSTRUCTION PERIOD

Apart from normal site inspections and site meetings, the Contractor shall request the Engineer at the following stages of the contract to inspect and approve specific sections of the work:

- a) Site clearing and establishment
- b) Marking / pegging out
- c) Excavation of foundation for all fencing Posts
- d) Delivering and storage of material on site
- e) Installation of Fencing posts
- f) Installation of weld mesh
- g) Installation of Gates
- h) Installation of razor wire flat wrap
- i) Tidy Site

MATERIALS AND METHODS

1. PRELIMINARY AND GENERAL CLAUSES

- 1.1 Director-General - The term "Director-General", where used in this Specification, shall mean the Director-General for the Department of Water and Sanitation or his duly appointed representative.
- 1.2 Conditions of contract - The "Articles of Agreement", to be entered into and the "Conditions of Contract" are contained in the "Lumpsum Contract Agreement" of the Department of Water and Sanitation, which document may be perused at Head Office or at the offices of the various Regional Representatives. Tenderers are referred thereto for the full intent and meaning of all clauses, as no claim for extras resulting from the contractor's ignorance of such clauses shall be entertained.
- 1.3 Tender to be on official form - Tenderers must submit their tenders on the official FORM OF TENDER supplied for that purpose, which must be completed in all particulars. If the form of tender is amended in any way, such tender might be regarded as qualified and in validated accordingly.
- 1.4 Interpretation of tender documents - The tenderer must check the documents issued to him and, if any part or parts thereof are found to be missing, duplicated, illegible or insufficiently described, or if the documents contain obvious errors or discrepancies, he should apply immediately to the Director-General for clarification, failing which the Contractor shall be liable to make, at his own expense, any alterations or substitutions to the works rendered necessary through incorrect interpretation of such documents. In the event of discrepancies between the drawings and specifications, the latter shall apply.

It is to be clearly understood that this is a Lumpsum Contract, which makes provision only for the re-measurement of certain items as specified in the "Schedule of Quantities."

The specification and drawings describe, as far as it is possible, the work to be done and materials to be used, but everything incidental to the works or not described but clearly implied, shall be performed by the Contractor.

- 1.5 View site - Tenderers are advised to visit the site on which the buildings are to be erected and to make themselves thoroughly acquainted with the nature of the site and soil conditions, facilities for access, the conditions under which the work is to be executed, all other matters which may influence the works and any restrictions or conditions which may be imposed by Municipal or other Authorities, as no claim will be entertained on the grounds of ignorance of such conditions.
- 1.6 Site pegs - The Survey Pegs of the site will be pointed out to the Contractor, who must deposit with the Director-General a written receipt in respect thereof and take full responsibility thereafter for the work being set out correctly in accordance therewith and for any peg displacements or cost of resurveying.

- 1.7 Dimensions, etc. - All weights and measures shall be taken to be to the metric system, in accordance with the Systeme International d'Unités (SI). Figured dimensions are to be followed in preference to scaled measurements.
As the sizes of some materials and articles are subject to changes due to metrication, the approval of the Director-General to use sizes other than those specified shall not be unreasonably withheld.
- 1.8 Materials and workmanship - The work shall be executed with materials of the best quality and in the most substantial manner and to the entire satisfaction of the Director-General.
- 1.9 Samples - The Contractor shall furnish such samples as may be called for by the Director-General, who may reject all subsequent materials not corresponding with the approved samples.
- 1.10 Protection from storms, etc. - The Contractor shall protect the works from all storms, surface, and underground water and from inclement weather to the satisfaction of the Director-General.
- 1.11 Plant, water, electricity, etc. - The Contractor shall provide all plant, tools, labour, materials, cartage, scaffolding, temporary shuttering, water, electricity, etc., necessary for the due and proper completion of the work. Only clean, fresh water, free from vegetable or organic matter, earth, clay, acid, or alkaline substances, either in suspension or solution, shall be used, and the Contractor shall make his own arrangements with the local authority or Government Departments as required for the supply of water for building purposes.
- 1.12 Sheds and latrines - The Contractor shall erect, maintain, and remove at the completion of the work, ample temporary sheds for the proper storage of perishable materials and latrines for the use of the workmen.
- 1.13 Lighting, watching and guard railing - The Contractor shall provide all necessary lighting, watching and guard railing to the satisfaction of the Director-General and Local Authority.
- 1.14 Notice board - The Contractor shall erect and maintain and remove at the completion of the work, a notice board, size 1 200 x 1 000 mm, with lettering brilliantly executed thereon as shown on the drawings.
- 1.15 Articles of value - Any articles of value found on the site shall be handed to the Director-General, who shall be the sole judge as to what constitutes articles of value.
- 1.16 Rubbish - All superfluous material, earth and rubbish that may accumulate during the progress of the works shall be carted away.
- 1.17 Workmen's insurance - The Contractor shall insure his workmen in terms of any Workmen's Compensation Act in Force and shall indemnify the Director-General from any claims thereunder.
- 1.18 Anti-malaria precautions - The Contractor's attention is drawn to the need for compliance with the Regulations promulgated under the Public Health Act, No. 36 of 1919, in certain areas.
- 1.19 SABS specifications - All references to South African Bureau of Standards specifications and codes of practice shall be deemed to be references to the latest issues, of such specifications and codes, as may be amended from time to time. When called for by the Director-General, proof shall be furnished by the Contractor of compliance of a product with the relevant SABS Specification.
- 1.20 Materials to be of South African manufacture - Materials manufactured or produced in the Republic of South Africa shall be used, wherever possible, in carrying out the work to which this specification refers.

4. CONDITIONS OF CONTRACT

The conditions governing this Tender are as set out in the General Conditions of Contract for Construction Works, Third Edition (2015).

Contracts will only be awarded to Tenderers who, in the Engineer's opinion, are capable of manufacturing and supplying to the required standard. Workmanship shall conform to accepted industrial standards. The size of tools and equipment used shall be proportional to the task being conducted.

Tenders shall only be awarded on a fixed price basis and no escalation shall be considered.

The Contractor shall make no changes or modifications to any part of the design, or the equipment offered under this Contract without the written approval of the Engineer. The Department shall not accept any additional costs for any part of this Contract should any procedures contained therein are not complied with.

The Contractor shall be responsible to issue all his Sub-contractors with the relevant sections of this tender document, any additional cost resulting from Sub-contractors not being fully informed, shall be for the contractors' account.

Guarantee

The defects liability period as stipulated in the General Conditions of Contract for Construction Works, Third Edition (2015), shall read 12 (twelve) months from the date of issue of the Commissioning Certificate by the Engineer to the Contractor and shall terminate with the issue of the Final Certificate by the Engineer. The Contractor's Guarantee shall include all aspects of the manufacturing process, including work done by any Sub-contractors.

5. OCCUPATIONAL HEALTH AND SAFETY

The Occupational Health and Safety Act (Act number 85 of 1993) and related Regulations is applicable. Construction Regulations, Diving Regulations and Confined Areas Regulations have reference. The contractor shall notify the Department of Labour, prior to commencing with the project. The DWS shall ensure that the provisions of the OHS are complied with for the duration of the project. The contractor prior to commencing on with the project shall submit:

- A comprehensive OHS file in accordance with the OHS Act.
- A detailed site-specific risk assessment for review and acceptance.
- A detailed method statement for approval by the Project Manager.
- A detailed plan in terms of providing ventilation into the tunnel, gallery, and pipeline.

All work shall be done in accordance with relevant legislation(s) and regulation(s). The DWS reserves the right to stop the contractor from executing work, which is not in accordance with the contractor's OHS plan for the site or which poses a threat to the health and safety of persons. The contractor may not appoint a subcontractor unless the contractor is reasonable satisfied that the subcontractor has necessary competencies and resources to perform work safely. Any subcontractor appointment shall be approved by the Project Engineer. Where a contractor appoints a subcontractor, all OHS Act requirements shall be applicable to the subcontractor. The contractor shall appoint a full-time competent employee in writing as the project supervisor, with the duty of supervising the project.

When the contractor and employees is found contravening OHS Act, the DWS shall stop the work until such time that the contractor implemented corrective measures to the satisfaction of the DWS.

Section 37.2 Appointment

In accordance with the provisions of Section 37(2) of the Occupational Health and Safety Act 85 of 1993 wherein the Department of Water and Sanitation as Employer has entered into a contract with the Contractor, in terms of which the Contractor is to perform certain work and services for and on behalf of the Employer, subject to the terms and conditions as contained in such contract.

Then parties have agreed that in respect of performance of the work the Contractor shall be responsible for compliance with the Occupational Health & Safety Act and its Regulations. The Employer and Mandatory accordingly enter in this agreement in terms of Section 37(2) of the OHS Act, the terms, and conditions of which are set out in The Occupational Health and Safety Specification.

Risks Identified by the DWS

The following are the risks associated with this project as identified by the DWS:

- Service gate or isolating equipment failure
- Flooding
- Drowning
- Working at height
- Overhead Crane failure
- Injury due to falling material
- Failure of rigging equipment
- Falling due to slippery surfaces
- Scaffold and climbing equipment collapse
- Noise due to grinding, blast cleaning, etc

- Paint or chemical inhalation
- Injury due to hand tools
- Snake bite
- Hand arm vibration syndrome due to prolonged use of vibratory equipment
- Airborne Fibres and Materials
- Electrocution
- Moving Machinery
- Back injuries from carrying heavy loads
- Dehydration
- Injury of blasting equipment is serious
- Attack and theft (secluded site)

Notwithstanding the abovementioned risks the contractor shall formulate a risk management plan which will include additional risks identified by the contractor.

Costs of OHS

The cost for OHS shall be included in the Tendered rates.

6. MODIFICATIONS

Any modifications or deviations from the specification shall be indicated on the form "Proposed Alterations to Specification." The Contractor shall make no changes or modifications to any part of the design, or the plan offered under this Contract without the written approval of the Project Engineer. The DWS shall not accept any additional cost for any part of this Contract if this procedure has not been followed.

7. MEASUREMENT AND PAYMENT

Basic Principles

Notwithstanding the breakdown as indicated in the Tender Pricing Schedule, all the work and requirements of any nature as specified in this Technical Specification shall be covered by the Contractor in the pricing as reflected in the Tender Pricing Schedule. No additional cost for any work or requirement in this Technical Specification shall be allowed. All items covered by this Technical Specification shall be measured as final units meeting the functional requirements of the relevant specifications.

ALL PRICES IN THE TENDER PRICING SCHEDULE SHALL INCLUDE VALUE ADDED TAX.

8. BILL OF QUANTITIES

Bill of quantities shall be submitted with bid documents. Please read instructions before completing or filling the table.

9. DRAWINGS

Drawing provided for standard razor fencing