**Malteser International Europe · Grüner Weg 14, 50825 Cologne, Germany**

**Country Coordination Office**

**Plot No: 445 Kololo Road 3k South**

**Tong Ping, Juba Town**

**South Sudan**

**Juba, 25 January 2021**

**Specification of Bidding (SOB) for drilling of 4 boreholes in Wau and Jur River County (in and around Bussere Payam)**

**SOB-WAU-2021-0015**

1. Annex 1: Specification of Tendering
2. Annex 2: Bill of Quantity

We look forward to receiving your tenders by or before the **submission deadline on 05 February 2021 at or before 4:00 pm** via E-mail to**:** **mb.procurement-juba@malteser-international.org**.

Please write in the Subject line of your email with tender: **ITT-WAU-2021-0015 for drilling of 4 boreholes in Wau and Jur River County (in and around Bussere Payam)**

Thank you for your cooperation.

Sincerely Yours,

|  |  |  |
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| Logo Malteser International |   | **South Sudan Coordination Office** Nermin Silajdzic. Country Logistics and Security Cordinator – South SudanPlot No. 445, Block 3, Kololo - US Embassy Road.Central Equitorial State, Juba.M: +211 (0) 911 746 963 · M: +211 (0) 924 767 949nermin.silajdzic@malteser-international.org · Skype: nsilajdzic[www.malteser-international.org](http://www.malteser-international.org/)Malteser International Europe/Malteser Hilfsdienst e. V., County Court Cologne, VR 4726Executive Board: Karl Prinz zu Löwenstein, Dr. Elmar Pankau,Douglas Graf Saurma-Jeltsch, Verena Hölken |
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# A. SPECIFICATION OF BIIDING

Related to our advertised Invitation to procurement RFQ-WAU-2021-0015Malteser International herewith calls for tenders concerning drilling of 4 boreholes in Wau and Jur River County (in and around Bussere Payam). Most likely in Bringi, Wad Alel and Ngonba. The exact locations will be shared with the successful drilling company.

The technical specifications and conditions of the process are described below.

Suppliers are invited to present an offer complying with the requirements here below specified.

Under the following reference number:

 Donor project numbers: 1323-JUB

# Description of the organization and its activities

Malteser International, the worldwide relief agency of the Sovereign Order of Malta for humanitarian aid, has more than 50 years of experience in humanitarian relief and covers around 100 projects in some 20 countries in Africa, Asia and the Americas, annually. It provides aid in all parts of the world without distinction of religion, race or political persuasion. Christian values and the humanitarian principles of impartiality and independence are the foundation of its work.

In South Sudan, Malteser International operates in Juba, Yei, Wau, Maridi and Rumbek. In these locations, it’s activities include Health and Nutrition, Food Security and Livelihood, Water Sanitation and Hygiene and Health Programs

**Objective of SOB:** In accordance with the overall targets of above-mentioned operations, MI plans to order the drilling of 4 boreholes in Wau and Jur River County (in and around Bussere Payam). Most likely in Bringi, Wad Alel and Ngonba.

The technical specifications and conditions of the tendering process are described below in the Specification of Tendering and in the Annex 2: Bill of Quantity which are part of this RFQ.

Suppliers are invited to present tenders complying with the requirements here below specified.

# Tender Presentation

The tender shall be via E-mail to**:** **mb.procurement-juba@malteser-international.org**

**The deadline for the delivery of the tenders** **is: 05 February 2021 at or before 4:00pm**

* The tender shall be written in English.
* The tender should be valid for **30 days after the deadline.**
* The format BoQ can be used or a separate one depending on supplier’s choice.

# General conditions

* The tender shall be typed or written and signed on each page by the legal representative of the supplier,
* The winning supplier might be requested to provide catalogues, pictures, technical descriptions and/or samples of items at the order stage when required,
* The prices of the tenders will be expressed in United States Dollars. The prices must be on unit price basis as well as by totals,
* The prices will be considered fixed. No additional change of whatsoever nature and type will be accepted by Malteser International,
* Malteser International reserves the right to accept or reject all tenders depending on prevailing condition at the time.

# Technical specification

All construction materials shall be provided by the contractor to carry out these construction activities. The contractor is expected to handle supplied materials with care to avoid loss of material on site and to carry out the works professionally without any material wastage

# Mobilization

The contractor shall make his/her own arrangements for food, accommodation and storage facilities on ground. Further he/ she shall provide all plant and equipment and share a list of his/ her equipment including drilling plant and tools as part of the tender document. The Contractor shall nominate one key person who shall be responsible for the assignment on behalf of the Contractor and shall be the Contractor’s site representative. This person is indicated on the list of personnel which is part of the tender document (see annexes).

The Contractor shall arrange for transportation and security of all equipment and staff. He/ she shall take all necessary precautions to ensure the security and safety of works, materials, equipment and people associated with the works. MI shall liaise with the local authorities to ensure that the roads/sites are accessible by the Contractor in order for him/her to execute the works in record time.

# Siting of boreholes

The contractor shall be responsible to carry out geophysical surveys using VES (Vertical Electrical Depth Sounding) on the sites located for drilling. He/ she shall thus have competent staff, equipment and software for carrying out the surveys and interpreting the data. The rough location of the boreholes has been assessed by MI staff and community representatives. The contractor will be required to locate at least three probable sites for each borehole and number them in order of priority. The final site selection is made in coordination between contractor’s staff, MI staff and the community. A hydrogeological report will be submitted to MI.

# Drilling

The contractor shall be responsible to select the appropriate drilling procedure for the geology of each drilling site. The diameter must be adequate to accommodate the final borehole casing diameter plus a minimum annular space of 50 mm. The contractor may choose to either drill a hole of adequate diameter on the first pass or to drill a small diameter test hole, then ream to the desired size. Regardless of the procedure, payment shall only be for the drilled hole at the appropriate size.

The drilling method, drilling plant, drilling fluid and fluid additives are subject to approval and should be mentioned in the tender document. The drilling fluid and additives must be non-toxic and biodegradable. Its supply is a responsibility of the contractor.

Drill cuttings shall be placed in containers provided by the contractor. At each drill site, the contractor shall have sufficient sample container to accommodate all of the samples collected. The samples shall be kept available for inspection until the supervisor gives permission to dispose them.

During the drilling, completion and development of each borehole, the contractor shall maintain a detailed driller’s report. The report shall give a complete description of all formations encountered,

number of meters drilled, number of hours spent drilling, shutdown due to breakdown, length and type of casing and screen set, and other pertinent data as requested by the MI supervisor. The format of the report shall be approved by the supervisor previously and shall be signed by both the driller and the supervisor on a daily basis. In addition, the contractor shall measure and monitor the depth of the borehole in progress, the static water/ mud level in the borehole, the different depths of water strikes and aquifers and the penetration rates at various strata or change of tools.

The contractor shall be paid unit prices per meter in accordance with the depth drilled. The depth given in the Bill of Quantity are indicatives only and the unit prices per meter shall include all costs associated with the drilling e.g. drilling additives, preparation of daily drilling reports.

# Borehole construction

The final depth of the borehole and the other relevant depths involved in the design of the borehole shall be determined from measurements made by the contractor and the supervisor. The design of the borehole (intervals to be cased and screened, screen slot opening, etc.) are to be approved by the supervisor.

The gravel pack should consist of well graded river gravel. Under no condition should rock chippings be used. The material should be free of shale, mica, clay, dirt or organic impurities of any kind. The material should be carefully introduced into the hole to avoid bridging. The last 6 meters of annular space shall be filled with cement grout to provide a sanitary seal after the development of the borehole.

# Borehole development

The contractor shall develop the borehole by a combination of jetting with water and surging with air. The borehole shall be developed with great care to avoid any damage to the casings and screens. The development shall continue until the borehole is judged to be free of sand by the supervisor.

# Pump testing

The contractor shall conduct a pumping test on every successful borehole. As the 4 boreholes will be fitted with hand pumps, the test shall be at a constant yield and continuous pumping of 1m3/h for a period of 6 hours. Immediately after the pumping, the contractor shall measure the water-level recovery in the borehole over a minimum period of 1 hour, unless the water level has recovered to the original level before. During both the pumping and the recovery periods, the contractor shall measure the water level in the borehole using a calibrated electronic sensing device. The water level measurements are to be taken in accordance to the schedule indicated by the supervisor. The contractor shall analyse the results of the pumping test and report the results on forms provided by the supervisor before further installations.

# Water quality analysis

During the pumping test, the contractor shall collect water samples from the borehole for water quality analysis. The samples shall be collected from the pump flow direct into the container. The containers shall be labelled with the borehole number, date and time of sampling. The information shall be entered into a form provided by the supervisor.

The contractor shall have tests carried out in a laboratory approved by the supervisor to determine the following parameters: colour, odour, taste, electrical conductivity, pH, turbidity, temperature,

manganese, total hardness, Iron, chloride, fluoride, arsenic, nitrate and sulphate. Microbial parameters shall comprise faecal coliform counts.

# Borehole disinfection

After completion of the pumping tests the contractor shall undertake final disinfection of the borehole with a hypochlorite calcium solution with a concentration of 50mg/L of free chlorine. The chlorine shall be applied uniformly throughout the entire depth of the water in the borehole. All accessible portions of the borehole above the water shall also be wetted with a chlorine solution.

# Construction of concrete pad

The Contractor shall construct a concrete pad around the borehole casing sticking above the ground (around 30cm) and continuous with the underlying 6 m cement grout in the sanitary seal. The pad shall be 2m in diameter. The concrete shall be cast over a layer of compacted hard core with a minimum thickness 200 mm above the ground and continuous with the underlying cement grout. The drainage channel shall be at least 6 m long, sloping away from the pad. The Contractor shall ensure that the sides of the pad are straight by properly anchoring the forms. The top of the pad shall be trowelled to a smooth surface. The contractor shall keep the surface of the concrete pad moist for a period of 72 hours after the concrete has been placed.

# Installation of Indian Mark II hand pump

Prior to leaving a borehole unattended at any time, the contractor shall place a temporary cap on the borehole casing. An Indian Mark II hand pump shall be installed at each borehole. All necessary parts and tools for the installation are provided by the contractor.

1. **Terms of payment**
2. MI will withhold a retention fee of 10 % of the invoice paid until 6 months elapses to allow the observation for any defects in works. In case defects are observed in this period, the contractor will be required to make them good before the retention fee can be paid out.
3. All payments shall be done to the contractor’s account in US Dollars.
4. Submission of invoices is contingent on the issuance of a final certificate of practical completion prepared by MI’s supervisor at the field level.
5. Final Payment of cumulative 90% shall be made after submission of works completion report by the contractor, the final invoice and final certificate of practical completion.
6. Payment of the retention fees is done after no defects certificate is issued by MI’s supervisor after a joint site verification visit with the community.
7. **Annexes**
	1. Proposed bill of Quantity BoQ
	2. Proposed work plan
	3. List of technical personnel
	4. List of equipment
	5. Experience

# Timetable

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| Activities | DATE | TIME\* |
| Deadline for submission of tenders | 05 February 2021 | 04:00 p.m. |
| Opening of submitted tenders | 08 February 2021 |  |
| Notification of award to the successful contractor | 14 February 2021 | - |
| Signature of service contract | 15 February 2021 | - |

\* All times are local time in Juba, South Sudan

# Validity of tenders

Each company is bound to the tender submitted for a period of 30 days from the deadline for submission of tenders.

# Language of tenders

All tenders, official correspondence between companies and MI, as well as all documents associated with the tender request will be in English.

# Submission of tenders

All tenders must conform to the following conditions:

# Each tender must be submitted via E-mail to: mb.procurement-juba@malteser-international.org on 05 February 2021, at or before 04:00 pm (local time).

# Content of tenders

All submitted tenders must conform to the requirements mentioned in the SOB. Furthermore, they must include the following documents:

**Part 1 - Tender:** A tender for drilling of 4 boreholes in Wau and Jur River County (in and around Bussere Payam). The format BoQ can be used or a separate one depending on supplier’s choice. Additional sheets may be attached for further details.

**Part 2 - Legal documents**

* Copy of the company’s certificate of incorporation,
* Copy of Chamber of Commerce registration,
* Copy Tax Identification Certificate,
* Copy of Certificate of Operation,
* Company’s Bank Statement of last three months,
* Company’s official address,
* Bank account details (where money would be paid),

The should contain:

* + The format BoQ or a separate one depending on supplier’s choice.
	+ Copy of drilling license.
	+ Proposed work program for the drilling of the borehole
	+ List of technical personnel
	+ List of equipment

# Ownership of tenders

MI reserves/funds ownership of all tender received. As a consequence, bidders will not be able to stipulate requirements that their tenders are to be returned.

1. **Opening of submitted tenders**

The tenders will be opened on 08 February 2021 in MI Country Coordination Office in Juba, South Sudan, by the Evaluation committee. The selection process will be recorded in writing by the committee.

# Tenders evaluation

The criteria applied for the evaluation will be the legal conformity, the price, the technical experiences, the compliance with technical specifications and quality standards, and the capacity to deliver, delivery time and meet timeframes as specified. The work will be awarded to the winning bidder according to the timetable mentioned above.

1. **Specific Technical and Financial Evaluation Criteria to standards:**
* Comparative Bid Analysis and justification basing on responsiveness of the selected supplier by evaluation committee.
* Contract will directly be issued to the selected supplier upon approval.
1. **Terms of payment**

The payment will be done in United States Dollar by bank transfer or cheque as specified below:

* Payment terms will be within 10 business days after receipt of goods and invoice, by Electronic bank transfer.

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| **Annex 2: Bill of Quantity**  |  |  |  |  |

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| **Proposed Bill of Quantity for Borehole drilling** |  |  |  |  |
| The quantities stated against each item of the Bill of Quantities (BOQ) are the estimated quantities and are therefore provisional. The contractor shall be paid for **actual quantities used**. |
| S/N | Description | Unit | Qty | Unit price USD | Amount USD |
| 1. Preliminary and general |
| 1.1 | Mobilization of personnel, equipment and materials | lumpsum | 1 |   |   |
| 1.2 | Geo physical survey Perform VES ground water survey and determine most potential and appropriate location for high yield borehole. The survey must be conducted by an experienced Hydrogeologist consultant /expert. Including preparation and submission of hydrogeological report  | lumpsum per BH | 4 |   |   |
| Subtotal 1. Preliminary and general |   |   |   |   |
| 2. Borehole construction |
| 2.1 | Drilling to a maximal depth of 90m Note: depth depending on geo physical survey (most boreholes in the area are 40m deep and the water intake is above 20m depth) | m of drilling  | 160 |   |   |
| 2.2 | Sampling and storage of drill cuttings at 2m intervals or as instructed by Engineer | lumpsum per BH | 4 |   |   |
| 2.3 | Supply and installation of UPVC casings (5"ND) 3M long x 170mm (5") external diameter with a minimum thickness of 3mm including end cap (average of 40m minus the length of the screen) | # pipes  | 38 |   |   |
| 2.4 | Supply and installation of UPVC screens (5"ND ) 3M long x 170mm (5") external diameter with a minimum thickness of 3mm (average of 12m per BH) | # pipes | 16 |   |   |
| 2.5 | Supply and installation of gravel pack with uniform grading between 2.5 and 4.0 mm diameter from clean river gravel (5m3 per BH) | m3 | 20 |   |   |
| 2.6 | Well developed during a minimum of 6 hours until a stabilized satisfactory yield is reached and the turbidity is less than 5 NTU clear water according to technical specifications  | hrs | 24 |   |   |
| 2.7 | Supply and installation of cement grouting of 1m diameter and 4m depth below the ground level, with all required activities, around the casing to act as sanitary seal (1m3 per BH) | m3 | 4 |   |   |
| Subtotal 2. Borehole construction |   |   |   |   |
| 3. Test pumping |
| 3.1 | Perform a minimum of 6 hours constant rate test and recovery data are to be reported on standard borehole log. At least a yield of 5,000 ltrs/h is realized as per installation  | lumpsum per BH | 4 |   |   |
| Subtotal 3. Test pumping |   |   |   |   |
| 4. Water quality analysis |   |   |   |   |
| 4.1 | Water sampling, physical test, bacteriological and chemical test analysis, Original copies of results of the Water quality testing, showing date of sampling and date of analysis must be availed by contractor prior to payment for drilled borehole. The analysis to be checked against GOSS and WHO standards, and levels to be permissible before further construction.  | lumpsum per BH | 4 |   |   |
| 4.2 | Clean and disinfect the borehole with chlorine solution of 50mg free clorine per liter with all required related activities.  | lumpsum per BH | 4 |   |   |
| Subtotal 4. Water quality analysis |   |   |   |   |
| 5. Hand pump installation |   |   |   |   |
| 5.1 | Supply and installation of pedestral, water tank, pump head assembly and cylinder | set | 4 |   |   |
| 5.2 | Supply and installation of India Mark II raiser pipes with sockets and connecting rodes (according to water level and pump test; average of 6 pipes) | set | 28 |   |   |
| Subtotal 5. Hand pump installation |   |   |   |   |
| 6. Head work |   |   |   |   |
| 6.1 | Reinforced Concrete construction of apron (diameter 2m, raised 30cm to allow proper drainage) and installation of the hand pump pedestal & third plate, to cover the borehole. Construction of a drainage channel (6m long). Keep moist for at least 72 hours.  | pc | 4 |   |   |
| 6.2 | Excavation and construction of soak away pit (2m deep) filled up with stones  | pc | 4 |   |   |
| 6.3 | Cleaning the working site and removing all of the unnecessary items | sites | 4 |   |   |
| 6.4 | completion reports | sites | 4 |   |   |
| Subtotal 6. Head work |   |   |   |   |
| TOTAL |   |   |   |   |

Note: Grand total should include all costs associated with the drilling works including but not limited to company overhead, labour, materials, transport and 10% withholding tax on services. Contractors are advised to familiarize themselves with the site location in order that they may know the cost of transport.

On behalf of Malteser International: Date: 25 January 2021

Sincerely,

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| Logo Malteser International |   | **South Sudan Coordination Office** Nermin Silajdzic. Country Logistics and Security CoordinatorPlot No. 445, Block 3, Kololo - US Embassy Road.Central Equitorial State, Juba, South SudanM: +211 (0) 911 746 963 · M: +211 (0) 924 767 949nermin.silajdzic@malteser-international.org · Skype: nsilajdzic[www.malteser-international.org](http://www.malteser-international.org/)Malteser International Europe/Malteser Hilfsdienst e. V., County Court Cologne, VR 4726Executive Board: Karl Prinz zu Löwenstein, Dr. Elmar Pankau,Douglas Graf Saurma-Jeltsch, Verena Hölken |
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