

# **Drilling and Well Construction of Five(5) Boreholes in Kidepo Valley National Park**

**USAID/ Uganda Biodiversity for Resilience (B4R) Activity**

## **BIDDING DOCUMENTS VOLUME 6 OF 6**

*February 2023*

Volume 6 (Appendices) consists of the following documents:  
Volume 6.1 Construction Health and Safety Template  
Volume 6.2 Construction Quality Control Template  
Volume 6.3 Environmental Plan Template  
Volume 6.4 Gender and Social Plan Template

# CONSTRUCTION HEALTH AND SAFETY PLAN

## Acknowledgement

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Subcontracting Firm: \_\_\_\_\_

*The undersigned have read and concur with this Construction Health and Safety Plan:*

\_\_\_\_\_  
Subcontractor Project Manager Date

\_\_\_\_\_  
Subcontractor Construction Superintendent Date

\_\_\_\_\_  
Subcontractor Quality Control Manager Date

\_\_\_\_\_  
Subcontractor Site Safety Manager Date

\_\_\_\_\_  
Subcontractor Civil Foreman Date

\_\_\_\_\_  
Subcontractor Mechanical Foreman Date

\_\_\_\_\_  
Subcontractor Electrical Foreman Date

## **Project Team**

Subcontractor Project Manager: (Name, phone)

*Responsible for implementing and updating the Construction Health and Safety Plan and all contract-related matters.*

Subcontractor Construction Superintendent: (Name, phone)

*Responsible for supervision of construction activities on a daily basis, compliance with construction specification, and the accuracy of as-built drawings.*

Subcontractor Site Safety Manager: (Name, phone)

*Responsible for implementation of all health, safety, and security requirements in accordance with the contract documents. Must be present when work is in progress.*

## **Emergency Services**

Fire: (Phone and address)

Ambulance: (Phone and address)

Police: (Phone and address)

Park Security: (Name, phone and address)

## Site Information

Park Name: \_\_\_\_\_

Site Locations: \_\_\_\_\_

### Regional Map

*Insert a map of the region surrounding the project site. Include all project sites where you will be working, locations of emergency service providers, and any other relevant information.*

### Site Map

*Insert maps of each project site where work you will be working. Include designated Emergency Assembly areas, evacuation routes, locations of first aid kits and fire extinguishers, sanitation facilities, and any other relevant information.*

## Construction Activities

### Summary of Statement of Work

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### Definable Features of Work

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

## Safety Requirements

### Workplace Safety

We will ensure a safe, sanitary, and organized work environment. We will maintain an adequate number of toilets on site for both men and women. We will ensure personnel have access to safe drinking water, an adequate seating area for breaks and meals, and first aid kits.

We will also maintain on site a team of designated personnel trained in first aid response. We will ensure First aid supplies are available at all times and easily accessible when required. The contents of the first aid kit will be placed in a weatherproof container with individual sealed packages for each type of item. We will check these at least weekly to ensure that the expended items are replaced. We will have a vehicle on site to use for the evacuation of personnel from the site.

We will make suitable arrangements for antimalarial and HIV precautions, for prevention of epidemics, and for all necessary welfare and hygiene requirements. We will arrange health services for our employees with local health clinics and implement mandatory monthly HIV/AIDS awareness sessions.

### PPE, Task Readiness, and Training

We will provide personnel with any and all Personal Protective Equipment (PPE) required to complete the construction works. This may include, but is not limited to, equipment for eyes, face, head, and

extremities, protective clothing, respiratory devices, and protective shields and barriers. We will ensure all PPE is appropriately sized for each individual. We shall maintain PPE in a sanitary and reliable condition and visually inspect equipment prior to use. If PPE is found to be defective, it will be removed from service immediately.

We will conduct a preliminary inspection and task readiness review during the Preparatory Phase for each Definable Feature of Work. During this review, we will review the manpower plan to ensure personnel assigned to each task have the appropriate safety training, on-the-job training experience, training with equipment and tools, and PPE.

We will also review the hazards analysis and all required mitigation measures to be taken during implementation of the work. We will verify equipment and machinery are in safe working order and all Material Safety Data Sheets are documented and shared with the Construction Civil Engineer.

Prior to starting any Definable Feature of Work, we will hold a scheduled meeting to ensure all personnel understand the task, any hazards and mitigation measures, PPE, required qualification/certifications, and inspection requirements. We will keep records of the participants at this meeting and verify all personnel have completed the initial training before working on a new Definable Feature of Work.

If applicable at the site we will take necessary precautions against Tsetse flies including avoiding wearing dark/blue colored clothing, use of traps or any additional PPE requirements.

### Site Security

We accept responsibility for the safety and security of all personnel on site. We will inform all visitors of hazards, PPE requirements, off-limit areas, and emergency protocols when they arrive on site. We will develop and provide a standard safety briefing to all visitors prior to conducting site visits. We will provide the B4R team and other program representatives with all necessary equipment for safe access to observe or inspect the work, regardless of frequency. We will record visitor information in the daily log.

We will be responsible for maintaining security at the construction site in accordance with all guidance from Uganda Wildlife Authority, Kidepo Valley National Park. We will install fencing, barriers, signage, etc. as appropriate to ensure non-workers will not access the site without consent.

### Accident Reporting

In the event of an incident or accident involving subcontractor personnel or visitors, we will verbally notify the Clerk of Works and the Construction Civil Engineer within 2 hours of the incident, either in person or through a phone call. At a minimum, this will account for the persons involved and a description of the accident. Within 12 hours, we will submit a formal incident report using the B4R template.

### Hazardous Materials

*Please detail any hazardous materials that may be present on site, your plan for storage and handling, and any safety measures that you will employ.*

## Emergency Evacuation Procedures

### Evacuation Procedures

If there is a large or uncontainable fire, all personnel will evacuate the site immediately and call 999 or alert Uganda Wildlife Authority, Kidepo Valley National Park as soon as possible. Unless the assembly point is compromised or inaccessible, all personnel will stay at the Emergency Assembly Point until the emergency fire service arrives and directs otherwise. We will account for all personnel on site.

Throughout the period of construction, we will maintain and service fire extinguishers at each site that are:

- functional and refilled prior to the expiration date,
- easily accessible and unobstructed, and
- placed in the designated location in accordance with the site map(s) above

### Reporting Evacuations to RTI

If a site evacuation is required, we will notify the Clerk of Work and the Construction Civil Engineer via a phone call as soon as we reach a safe location and have notified the appropriate emergency services. The following individual will make this call: \_\_\_\_\_. In the event that they are not on-site or accounted for at the Emergency Assembly Point, the following alternative representative will take responsibility for the call: \_\_\_\_\_.

## Definable Features of Work Hazards Analysis

For each Definable Feature of Work, you are required to complete an analysis to assess potential hazards and establish safety controls to mitigate or eliminate the hazard. We have included samples below with some potential tasks that may be associated with the construction activities. You may use any that apply, but **you must review these thoroughly and make any modifications before submitting.**

Please outline all hazards and controls for **each Definable Feature of Work.**

Definable Feature of Work	Hazard	Control
I. SAMPLE	Hand and power tools	<ul style="list-style-type: none"><li>• Inspect tools prior to use. Any tools found to be defective will be rendered unsafe and removed from service.</li><li>• Keep tools in good condition and will only use them for the purpose for which they were designed. The subcontractor will prohibit throwing tools.</li><li>• Personnel will not operate power tools unless designated by a construction manager.</li><li>• Wear all required PPE.</li></ul>

		<ul style="list-style-type: none"> <li>• Equip any power tools with guards when in use if they are designed to accommodate guards</li> </ul>
	Elevated Work Surfaces	<ul style="list-style-type: none"> <li>• Scaffolding or work platforms exceeding 4 meters in height above their base support shall be designed by a professional engineer or in accordance with the manufacturer’s installation instructions.</li> <li>• Scaffolding or work platforms exceeding 2.5 meters in height above grade shall have handrails installed at a height of 1.2 meters above and parallel to the work surface.</li> <li>• All scaffold and work platforms installed shall be inspected by the Engineer of Record.</li> </ul>
2.		
4.		

**Welding**

When conducting any welding activities, the subcontractor will inspect all equipment daily. If any equipment appears to be defective, the subcontractor must remove it from service and either replace it or repair it before reinspecting it and continuing use. When work is suspended, the subcontractor will close torch valves, shut off gas supply, and ensure fuel-gas-oxygen combinations used in equipment, such as oxyacetylene, have reverse-flow check valves between the torch and regulator. They will also verify manifold systems have reverse-flow valves installed at the manifold connections.

The subcontractor shall maintain suitable fire extinguishers sized appropriately and in working condition at any welding location. Subcontractors will weld in open areas when possible and with proper guards protecting any immovable objects from sparks, slag, and excess heat. The subcontractor will also ensure personnel working in vicinity of welding operations are properly shielded. The subcontractor will not weld in the vicinity of gas cylinders, flammable paints, and other flammable compounds or where dust is heavily concentrated.

**Electrical Wiring**

The subcontractor shall ensure electrical work is performed only by qualified personnel with verifiable credentials and training who are familiar with applicable code requirements. Before work is started, the subcontractor shall de-energize all equipment and circuits to be worked on. If work must be performed on an energized system, then the subcontractor must first demonstrate that de-energizing introduces additional or increased or is infeasible due to equipment design or operational limitations. The subcontractor may never perform energized work without prior authorization. When it is necessary to work on energized lines, all personnel will use rubber gloves and other protective equipment and hotline tools insulated for the rated voltage.

The subcontractor will ensure live parts of wiring or equipment are guarded to protect all persons or objects from harm. They will also protect high voltage equipment and transformer banks from unauthorized access. The subcontractor will keep entrances locked that are not under constant observation and post signs prohibiting unauthorized entrance and warning of high voltage.



The subcontractor shall ground metallic enclosures and cover or elevate any electric wire or flexible cord passing through work areas to protect them from damage by foot traffic, vehicles, sharp corners, projections, or pinching. The subcontractor will keep plugs and receptacles out of contact with moisture unless they are approved submersible type. They will also keep overcurrent protection devices readily accessible, clearly labeled, protected from physical damage, and not placed in the vicinity of easily ignitable materials. The subcontractor will prevent accidental contact with temporary wiring by personnel or equipment by guarding, burying, or isolating it in elevation.

The subcontractor shall sufficiently size all electrical apparatus, fittings and conductors for their intended purpose and ensure they are constructed, installed, protected, worked and maintained to prevent danger, as far as is reasonably practicable.

The subcontractor will mark switch boxes, receptacle boxes, metal cabinets, enclosures around equipment, and temporary power lines to indicate the maximum operating voltage.

The subcontractor will provide suitable temporary barriers or other means to designate arc flash and electrical shock boundaries. The subcontractor shall design these boundaries to ensure the workspace cannot be used as a passageway while electrical work is being performed.

The subcontractor will check and accept temporary electrical distribution systems and devices for polarity, ground continuity, and ground resistance prior to initial use and prior to use after modification. They will also measure, record, and report ground resistance at the time of installation.

The subcontractor will remove combustible and flammable materials from the immediate work areas prior to the commencement of operations. Electric equipment and lines shall be considered energized until determined to be de-energized by tests or other means and grounds applied. Bare wire communication conductors on power poles or structures shall be treated as energized lines unless protected by insulating materials suitable for the highest voltage that may accidentally be applied to the line. No personnel shall be permitted to approach or take any conductive object without an insulating handle close to exposed energized parts.

Subcontractor personnel shall not use portable metal or conductive ladders near energized lines or equipment except in specialized work, such as in high voltage substations where non-conductive ladders might present a greater hazard than conductive ladders. The subcontractor shall mark conductive or metal ladders prominently as conductive and take all precautions when they are used in specialized work. Personnel shall not use measuring tapes or measuring ropes that are metal or contain conductive strands when working on or near energized parts.

Prior to climbing poles, ladders, scaffolds, or other elevated structures, the subcontractor shall inspect them to determine that the structures are capable of sustaining the additional or unbalanced stresses to which they will be subjected. A person trained and qualified to perform live-line bare-hand work shall personally supervise all line work. The subcontractor will only use tools and equipment intended for live-line barehand work. They will keep such tools and equipment clean and dry. Only qualified employees shall perform work on or adjacent to energized control panels. Personnel required to climb poles and other elevated surfaces shall be properly protected from fall through the use of approved fall arrest devices.

## **Material handling, storage, and disposal**

The subcontractor shall store all materials in a way that prevents sliding or tipping. They will stack and block all cylindrical materials to prevent spreading. They shall place piles and stacks away from roads and access ways. The subcontractor shall ensure storage areas are free from tripping, fire, and explosive hazards and prevent pest harborage.

The subcontractor shall stack lumber on level and solidly supported sills in a stable and self-supporting manner. Stacks shall not exceed 20 feet in height and the subcontractor shall remove all nails prior to stacking.

The subcontractor shall store bricks in stacks on a level surface to a height no greater than 2.1 meters.

The subcontractor shall ensure stacked bags of cement are stepped back and cross-keyed at least every 10 bags.

## **Hand and Power tools**

The subcontractor will inspect tools prior to use. Any tools found to be defective will be rendered unsafe and the subcontractor will remove them from service. The subcontractor will keep tools in good condition and will only use them for the purpose for which they were designed. The subcontractor will prohibit throwing tools.

Subcontractor personnel will not operate power tools unless designated by a construction manager. When using power tools, subcontractor personnel will wear all required PPE. The subcontractor shall equip any power tools with guards when in use if they are designed to accommodate guards.

## **Machinery and mechanized equipment**

Only certified personnel shall operate machinery and mechanized equipment. Before any machinery or mechanized equipment is placed in use, it shall be inspected and tested by a competent and certified mechanic to be in safe operating condition. The subcontractor shall retain records of tests and inspections at the site, which shall become part of the official project file and be made available upon request of the designated authority. The Project Manager shall designate qualified trade personnel to be responsible for the daily inspection of all machinery and equipment and to make sure it is in safe operating condition during use.

The subcontractor will run equipment under non-load conditions at the beginning of each shift to verify the safety and operating systems are in proper working condition. They will stop using any machinery or equipment found to be unsafe. The subcontractor will prohibit use of unsafe equipment until conditions have been corrected. Equipment deficiencies observed at any time that affect their safe operation shall be corrected before continuing operation.

Subcontractor personnel will not mount or dismount any equipment while it is in operation. They shall not operate machinery or equipment in a manner that will endanger persons or property nor shall they exceed safe operating speeds or loads.

All machinery or equipment shall be shut down with appropriate lockout/tag-out procedures followed to prevent operation while repairs or manual lubrications are being performed. Equipment designed to be serviced while running is exempted from this clause.

Personnel shall not move between a towed and towing piece of equipment until the towing equipment is stationary. The subcontractor will set the parking brake whenever equipment is parked and shall chock the wheels or block the track mechanism when parking equipment on inclines.

### **Excavation and trenching**

The subcontractor will locate all utilities and remove or support all surface encumbrances prior to initiating excavation works.

If equipment is working adjacent to open trenches or excavations all personnel shall vacate the workspace unless approved shoring is installed.

Employees shall not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation.

The subcontractor shall ensure proper sloping of excavations or trenches particularly when the excavation depth exceeds 2 meters or the trench depth exceeds 1.2 meters.

The subcontractor will obtain engineering approvals for:

- trench excavations exceeding 4.5 meters in depth or 1.5 meters in width
- foundations exceeding 4 meters in depth
- excavation that may affect other structures or utilities
- all shaft and tunnel excavations

The subcontractor will erect suitable barricades to prevent access to the excavation area by vehicles or equipment as necessary.

### **Blasting**

Blasting will only be allowed with the express permission of RTI and in accordance with any Government Regulations currently in force or other conditions set by RTI.

### **Elevated Work Surfaces**

Scaffolding or work platforms exceeding 4 meters in height above their base support shall be designed by a professional engineer or in accordance with the manufacturer's installation instructions.

Scaffolding or work platforms exceeding 2.5 meters in height above grade shall have handrails installed at a height of 1.2 meters above and parallel to the work surface.

All scaffold and work platforms installed shall be inspected by the Engineer of Record.

## **Cranes, hoists and lifts**

The equipment must not be assembled or used unless ground conditions are firm, drained, and graded to a sufficient extent so that, in conjunction (if necessary) with the use of supporting materials, the equipment manufacturer's specifications for adequate support and degree of level of the equipment are met.

The equipment must not be operated in excess of its rated capacity and must not be used to drag or pull loads sideways. Equipment must also not be operated without the counterweight or ballast in place as specified by the manufacturer.

A qualified person shall visually inspect cranes prior to each shift to observe deficiencies during operation. If any deficiency is identified, an immediate determination shall be made by the competent person as to whether the deficiency constitutes a hazard. If the deficiency is determined to constitute a hazard, the subcontractor shall remove the hoisting equipment from service until the deficiency has been corrected. The equipment operator shall be responsible for those operations under the operator's direct control. Whenever there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle loads until safety has been assured.

The operator must not engage in any practice or activity that diverts his/her attention while actually engaged in operating the equipment. The operator must not leave the controls while the load is suspended.

Routes for suspended loads shall be pre-planned to ensure that no employee is required to work directly below a suspended load except for employees necessary for the hooking or unhooking of the load.

If any part of the equipment while traveling will get closer than 20 feet to the power line, the employer must ensure that a dedicated spotter who is in continuous contact with the driver/operator is used. The dedicated spotter must be positioned to effectively gauge the clearance distance and must give timely information to the operator so that they can maintain the required clearance distance. Where necessary, the spotter must also use equipment that enables them to communicate directly with the operator.

A qualified signal person must be provided if the load or area of placement is not in full view of the operator, if the view in the direction of travel is obstructed, or if either the operator or the person handling the load determine that it is necessary.

## **Fall protection**

Personnel who are on a walking/working surface with an unprotected side or edge more than 4.6 meters above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

Personnel engaged in activities involving working from a mechanized platform or erected tower exceeding 2.5 meters above grade shall be equipped with a full body harness and lanyard as part of a fall arrest system attached to a fixed support in accordance with manufacturer's instructions.

## **Safety by overhead power lines**

Where work is to be carried out in the vicinity of overhead power lines, the Contractor shall ensure that all persons working in such areas are aware of the relatively large distance that high voltage electricity can “short” to earth when cranes, or other large masses of steel, are in the vicinity of power lines. The Contractor shall be required to work outside safe clearances.

## **Hazardous Energy Control**

The subcontractor will perform a lockout and tag-out of equipment to avoid any unexpected energizing, start up, or release of stored energy. Only authorized personnel as determined by the Subcontractor Project Manager will perform lockout or tag-out. The subcontractor’s qualified personnel shall ensure that all energy-isolating devices are identified and that the system is shut down, isolated, and blocked by qualified personnel. They will also notify all personnel affected by the lockout or tag-out prior to and upon completion of the application and removal of the lockout or tag-out. Qualified personnel shall also ensure that any system operated by a remotely controlled source is completely isolated.

- Lockout devices will be affixed to each isolating device in a manner that will maintain the energy isolation device in the safe position.
- Tag-out devices shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the safe position is prohibited.

Following the application of lockout or tag-out devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained or otherwise rendered safe.

Prior to starting work on systems that have been locked out or tagged out, the authorized personnel shall verify that isolation and deenergizing of the system have been successfully accomplished. The authorized personnel who applied the device shall remove each lockout or tag-out device from each energy-isolating device. Before lockout or tag-out devices are removed and energy restored to the system, the authorized personnel shall ensure the work area has been inspected and all non-essential items have been removed from the system, the system components are operationally intact, and all personnel have been safely positioned or removed from the area.

Authorized personnel will check that there is no electrical flow using a detector to assure that the deenergizing of the system has been accomplished.

Personnel working in close proximity to locked out equipment will be instructed by the personnel supervising the lockout and associated repairs that they are not allowed to touch any lockout or tag-out devices or any electrical accessories.

## **Toxic substances**

The subcontractor must ensure that the Safety Data Sheets for each hazardous substance used in the workplace is available to personnel, and that a central register of hazardous substances is established. The following information should be included on the Safety Data Sheets:

- potential health effects

- precautions for use
- safe storage suggestions
- emergency first aid instructions
- contact numbers for further information.

The subcontractor will train personnel in handling and safety procedures, provide PPE as required, and store chemicals in a separate and designated area. The subcontractor will follow all manufacturer recommendations when working with the toxic substance.

The subcontractor shall ensure that the packages of a hazardous chemical delivered to the workplace are labeled and that the appropriate safety data sheet for the chemical is delivered to the workplace. They shall maintain a list or register of the chemical safety data sheets at the workplace. A copy of chemical safety data sheets and of the list of the safety data sheets shall be given to the workers concerned and shall be available to their representatives for consultation, at any time.

Processes which involve a significant risk of exposure to very hazardous substances shall, as far as is reasonably practicable, be performed within an enclosed system, to prevent any contact between the hazardous substance and any person.

### **Working in dangerous environments**

The subcontractor and all personnel will not travel throughout Kidepo Valley National Park without a UWA Ranger to provide protection. The subcontractor will also not travel after dark.

The subcontractor will secure all construction sites according to UWA guidance.

The subcontractor will provide training for all personnel in accordance with UWA guidance that includes action plans and directives for encounters with dangerous wildlife, poachers, and other threats.

# CONSTRUCTION QUALITY CONTROL PLAN

## Acknowledgement

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Subcontracting Firm: \_\_\_\_\_

*The undersigned have read and concur with this Construction Quality Control Plan:*

\_\_\_\_\_  
Subcontractor Project Manager Date

\_\_\_\_\_  
Subcontractor Construction Superintendent Date

\_\_\_\_\_  
Subcontractor Quality Control Manager Date

\_\_\_\_\_  
Subcontractor Site Safety Manager Date

\_\_\_\_\_  
Subcontractor Civil Foreman Date

\_\_\_\_\_  
Subcontractor Mechanical Foreman Date

\_\_\_\_\_  
Subcontractor Electrical Foreman Date

## Project Team

Subcontractor Project Manager: (Name, phone)

*Responsible for implementing and updating the Construction Health and Safety Plan and all contract-related matters.*

Subcontractor Construction Superintendent: (Name, phone)

*Responsible for supervision of construction activities on a daily basis, compliance with construction specification, and the accuracy of as-built drawings.*

Subcontractor Quality Control Manager: (Name, phone)

*Responsible for ensuring the implementation of all quality control requirements in accordance with the contract documents. Must be present when work is in progress.*

## Construction Activities

### Summary of Statement of Work

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### Definable Features of Work

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

## Three Phases of Quality Control

### Preparatory Phase

We will schedule Preparatory Phase meetings roughly 10 days in advance of the start of each Definable Feature of Work. The subcontractor will notify the Clerk of Works at least 48 hours in advance of the



meeting. At a minimum, the Clerk of Works will be present, along with our Project Manager, Quality Manager, and impacted construction leaders (Foremen, Superintendent). We will also invite the end-user Uganda Wildlife Authority, Kidepo Valley National Park to attend. This meeting will consist of the following:

- Review contract requirements and applicable specifications.
- Review design plans.
- Check to assure that all materials and/or equipment are on hand and have been tested, submitted, and approved.
- Check to assure that provisions have been made to provide required control testing and define a testing schedule.
- Review the Manpower Plan and verify staff have adequate training and experience.
- Review hazard analysis and environmental mitigation requirements.
- Verify all related RFIs are resolved and understood by all parties.
- Examine the work area to assure that all preliminary work has been accomplished and existing conditions match the parameters used for design. The Clerk of Works will take photos and note any irregularities.
- Physically examine required materials, equipment, and sample work to assure they are on hand and conform with any approved shop drawings and submitted data.
- Submit any remaining RFIs to clarify areas of confusion or potential issues.
- We will record minutes and submit to the Construction Civil Engineer within 48 hours of the meeting.

Preliminary Schedule for Preparatory Meetings:

*Based on the Construction Schedule please outline here **planned dates for the Preparatory Meetings** associated with each Definable Feature of Work*

### **Initial Phase**

At the beginning of each Definable Feature of Work, we will hold an Initial Phase meeting and inspection. We will notify the Clerk of Works at least 48 hours in advance of the meeting. At a minimum, the Clerk of Works and Construction Civil Engineer will be present, along with our Project Manager, Quality Manager, Construction Leaders, and all crew members involved in construction. The end-user Uganda Wildlife Authority, Kidepo Valley National Park will also be invited to attend. In this phase, we will use the Quality Control Checklist specific for each Definable Feature of work, but each consists of the following basic steps:

- Review minutes of the Preparatory Meeting and verify all RFIs have been resolved
- Verify all preliminary work has been completed and conditions are as expected.

- Check new work for compliance with contract documents.
- Review control testing.
- Establish level of workmanship as defined by the Quality Control Checklist and contract specifications.
- Check for defective or damaged materials.
- Check for omissions and resolve any differences of interpretation.
- General check of dimensional requirements.
- Review safety and environmental compliance requirements.
- The subcontractor will record minutes and submit to the Construction Civil Engineer within 48 hours of the meeting.

After a representative sample of the work has been completed, we will perform a second Initial Phase inspection with the Clerk of Works using the Quality Control Checklist. This inspection will verify the expected level of workmanship is being met. We will perform any appropriate testing of the representative sample.

### Follow-Up Phase

We will perform daily checks to assure continued compliance with workmanship established at the Initial Phase and defined in the contract documents. We will also review safety and environmental mitigation measures during these inspections. We will continue these checks until the completion of the Definable Feature of Work. We will document the inspections in the daily log.

### Quality Testing and Submittals

We will perform testing in accordance with the contract specifications and Quality Control Checklists created for each Definable Feature of Work. The Clerk of Works will be present for all required testing. During the Preparatory Phase, our Quality Control Manager will identify all necessary tests and a preliminary schedule for conducting the tests. We will record the tests in the submittal register and tie each test to a distinct submittal number, clearly indicating the location of the work. We will then submit these to the Clerks of Work and Construction Civil Engineer for approval from the Designer of Record.

Our records and submittals will cover both conforming and defective features and will include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract.

We will also provide material submittals certifying conformance with technical specification, certification, warranties, or instruction manuals as detailed in the contract documents and provided in the Contract Submittal Register. Any materials that do not align with contract requirements will be marked as rejected and removed from the site.

*Describe here any required **materials with a higher risk of causing schedule delays** due to long lead times, critical or non-standard specifications, supplemental testing, etc. Also list any steps you will take to mitigate delays and non-conformances.*

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## Records and Reporting

Our Quality Manager will maintain records of:

- The Construction Quality Control Plan
- Staff training
- Meeting Minutes from Preparatory and Initial Meetings
- Daily Logs with Inspection Records
- Monthly Reports
- Material and Testing Submittals
- Updated Construction Schedule
- Red-Lined Drawings and As-Built Drawings

### As-Built Drawings

During the course of construction, we will maintain an updated set of Red-Lined Drawings on site. These will indicate variations in the as-built construction from the approved design drawings. We will develop a set of As-Built Drawings upon completion of the construction work which will reflect the actual condition of the site at completion.

# ENVIRONMENTAL PLAN

## Acknowledgement

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Subcontracting Firm: \_\_\_\_\_

*The undersigned have read and concur with this Environmental Plan:*

\_\_\_\_\_  
Subcontractor Project Manager Date

\_\_\_\_\_  
Subcontractor Construction Superintendent Date

\_\_\_\_\_  
Subcontractor Quality Control Manager Date

\_\_\_\_\_  
Subcontractor Site Safety Manager Date

\_\_\_\_\_  
Subcontractor Civil Foreman Date

\_\_\_\_\_  
Subcontractor Mechanical Foreman Date

\_\_\_\_\_  
Subcontractor Electrical Foreman Date

\_\_\_\_\_  
Subcontractor Environment Officer Date

## I. Purpose

The Environmental Plan is intended to comply with the requirements defined by Uganda’s National Environmental Management Authority (NEMA) and USAID’S Environmental Mitigation and Monitoring Plan (EMMP). The purpose of the Environmental Plan is to provide a plan to minimize adverse effects and enhance the quality of the environments so that expected benefits of the development project can be fully realized.

## 2. Roles and Responsibilities

Subcontractor Project Manager: (Name, phone)

*Responsible for implementing and updating the Construction Health and Safety Plan and all contract-related matters.*

Subcontractor Construction Superintendent: (Name, phone)

*Responsible for supervision of construction activities on a daily basis, compliance with construction specification, and the accuracy of as-built drawings. The Construction Superintendent will also be responsible for ensuring compliance with all environmental protocols defined in this Environmental Plan.*

## 3. Environmental Requirements

Please reference the specifications in Volume 3.1 Supplementary Technical Specifications and Volume 3.2 EMMP for all environmental requirements during the construction phases.

Activity	Impact	Mitigation Measure	Monitoring Indicator/Method	Frequency & Timing of Monitoring
Prior to start-up of construction	Permitting	The contractor will ensure all required permits, licenses and approvals are acquired in compliance with GOU environmental requirements		
Construction of Ranger Posts, boreholes and LWSCs	Construction activities could result in the animal disturbance due to human and vehicular presence and this may result in movement of large and medium-sized mammals away from preferred habitat and possibly into communities (especially a concern for large grazing mammals that might compete with livestock and where disease transmission could take place,	1) UWA shall conduct a preliminary monitoring and awareness raising visit and briefing for the contractor prior to construction 2) UWA shall establish, and the contractor will enforce areas that are off limits for human and vehicular use to protect mammals using areas in the vicinity of construction sites, as well as to protect construction workers; 3) The contractor shall		

	<p>and for predators).</p> <p>Concerns include movement of construction machinery and other vehicles; excessive noise; use of fire during construction activities; and construction works during wet season and after daylight hours.</p>	<p>not begin work in the protected area before the hours of 7am nor after the hour of 6pm. so that animals are not chased off-site and to protect construction workers from attack.</p> <p>4) UWA shall enforce speed limits for vehicles transporting materials or people for construction works;</p> <p>5) UWA shall establish noise levels that will be acceptable to limit excessive noise. UWA shall monitor compliance to this requirement</p> <p>6) UWA will monitor and ensure that use of fire must only be for required purposes and in the presence of an UWA ranger with training in fire management.</p> <p>7) UWA shall advise and ensure that construction takes place during the dry season, especially for LWSCs. The dry season is expected to be approximately November-June but ultimately will be defined at RTI's discretion depending on site conditions.</p> <p>8) UWA shall conduct awareness raising talks before commencement of works for construction workers about the correct behaviors around wildlife, including avoiding excessive noise; prohibitions against the use of fire; prohibitions against harassing wildlife; limiting work areas to the footprint and respecting off-limits areas; and speed limit requirements and any other requirements as specified in the relevant</p>		
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		<p>policies and laws and the operational guidelines for developments in protected areas.</p> <p>9) UWA shall hold regular consultations with communities nearest to construction sites to monitor and take measures to alleviate animal migration out of KVNP and human-wildlife conflict.</p>		
	<p>Construction activities could indirectly result in the death of the critically endangered white-headed vulture if trash is left on-site and accessible to vultures or if material that could be toxic to vultures is used at construction sites.</p>	<p>The contractor shall ensure that:</p> <p>1) Trash-coded bins are provided for workers and for waste construction material and that they are tightly closed when not in use. These must be available from day one at each construction site; and</p> <p>2) Trash is removed from site to an environmentally sound final destination on a timely basis (to be determined based on the construction activities and UWA's input).</p> <p>3) UWA shall raise awareness (at least weekly) among construction workers of the required protection measures for white-headed vultures, including proper disposal of trash, minimizing use of plastics on-site; and prohibitions against the use of poison (e.g., for rodent control) or any material that could be toxic to vultures.</p>		
	<p>Construction activities could adversely affect nesting birds, including the hamerkop (of tourist interest), especially those nesting in the vicinity of</p>	<p>1) UWA shall conduct a preliminary monitoring and awareness raising visit prior to the start of construction at each site to identify hamerkop nests and other nests of birds of</p>		

	<p>construction works. Excessive noise, cutting down trees with nests, and general disturbance</p>	<p>ecological importance/concern in the vicinity of the proposed work and to establish:</p> <ul style="list-style-type: none"> <li>i. Trees with nests that should not be cut or damaged;</li> <li>i. Areas that are off-limits for human and vehicular use to protect nesting birds; and</li> <li>i. Times of day that are off limits for construction activities.</li> </ul> <p>2) UWA shall hold refresher awareness raising talks (at least weekly) for construction workers so that they are aware of proper behavior around nesting birds, including not to cut branches and to minimize excessive noise and activities.</p>		
	<p>Discharge of waste could contaminate KVNP ecosystems and could affect KVNP fish, wildlife, and birds. The waste disposal concern includes food and food containers brought in by workers, waste material from construction activities (fuel, oil, excess construction material), and human waste, collected in latrines or temporary toilets for daytime workers and if workers will remain overnight.</p>	<p>The contractor shall ensure that all waste is handled and disposed of in an environmentally sound manner as follows:</p> <ul style="list-style-type: none"> <li>1) As above, waste receptacles are provided for construction worker use, are covered when not in use, and are emptied at sufficient intervals (based on the number of workers and use of waste receptacles) outside the park;</li> <li>2) Construction material is stored properly by placing waste and stored supplies away from sensitive habitat, species, and aquatic areas, including wetlands, and is removed from construction sites on an adequate schedule to areas outside the park to minimize waste left on-site; and</li> <li>3) Leaks or spills of fuel or</li> </ul>		



		<p>oil are reported and cleaned up immediately; services involving fuel and oil are not undertaken on-site; and no fuel or oil is stored on-site, rather, waste fuel and oils will be collected and stored in a facility licensed by NEMA and transport will be by a NEMA-licensed contractor only.</p> <p>4) UWA shall hold awareness raising talks (at least weekly) for construction workers so that they are aware of the proper waste disposal measures and vehicle servicing measures.</p> <p>5) Vehicle servicing should be done outside the park as much as possible and if it has to be in the park the area should be underlined by an impermeable membrane to prevent oil leakages</p>		
	<p>Diseases can be Transmitted between humans and wildlife from poor waste management practices.</p>	<p>1) The contractor shall ensure that temporary toilets or latrines are available at each site at the start of construction works; that waste from temporary toilets and latrines is emptied on an adequate basis so that no spills/overflow result; and at the end of construction, toilets and latrines are removed and the areas are returned to preconstruction conditions. There should be provisions for both men and women.</p> <p>2) The contractor shall ensure that construction workers are Monitored on a routine basis (temperature and other aspects) to ensure they are not carrying diseases that</p>		

		<p>can be transmitted to animals.</p> <p>3) UWA shall hold awareness raising talks (at least weekly) for construction workers so that they are aware of the above disease control measures.</p>		
	<p>Workers may poach animals, fish, or poach other park resources for their own use or for income generation</p>	<p>1) UWA shall hold awareness raising talks (at least weekly) for construction workers so that they are aware of the prohibitions and penalties against poaching.</p> <p>2) UWA shall conduct spot checks at construction sites to ensure that poaching is not taking place.</p> <p>3) UWA shall be involved in recruitment process of any casual labor and/or community members so that any known poachers are not recruited</p>		
<p>Construction of Ranger Posts</p>	<p>Construction phase activities (machinery and workers) could introduce invasive species that outcompete native species; of particular concern is that invasives provide little wildlife benefit.</p>	<p>UWA shall implement alien invasive species protocol, including regular monitoring for germination of alien invasive species and if found, removal manually or by machine; as practicable, washing equipment that is brought in; and being mindful of where murrum is obtained and placed since it will likely carry seeds from outside the PA which could be invasive. The contractor is advised to obtain murrum from the park as much as possible to prevent importation of invasives.</p>		
	<p>Use of construction Equipment resulting in increased air pollution and dust creating health risks for workers.</p>	<p>1) The contractor shall provide and enforce use of personal protective equipment (PPE) to workers to</p>		

		<p>protect against contaminants carried by air (mainly diesel and at RPs, paint); that PPE is well maintained; and that construction workers are trained how and why to use PPE.</p> <p>2) The contractor shall ensure that vehicles and machinery are serviced regularly and that high quality fuels and lubricants are used to minimize toxic emissions.</p>		
	<p>Obtaining sand for construction from inside KVNP (sand, rock, murrum) could degrade habitats/ ecosystems from areas where it is removed.</p>	<p>1) The contractor shall comply with the park's requirements for obtaining sand: a park ranger will always be on-site to monitor mining of sand; the geographical position will be reported; and the number of trips will be recorded; mining from the road on the upper side of the river will not be allowed to decrease erosion; and sand will only be removed from the UWA designated location</p>		
	<p>Obtaining Construction material from outside the park (borrow pits, etc.) could degrade habitats/Eco systems when material is removed.</p>	<p>When available, UWA will designate areas where murrum can be mined. If it is not available:</p> <p>1) The contractor shall consult with district authorities and comply with their requirements, including any borrow pit grading and closure requirements.</p>		
	<p>Soil erosion and siltation of streams, rivers, and ponds could degrade habitat, mainly of aquatic species and species that rely on aquatics for food.</p>	<p>UWA shall ensure that:</p> <p>1) Prior to construction, areas prone to erosion are demarcated and measures to stabilize them are put in place and remain in place throughout the construction period. This is especially critical for river embankments; and</p>		

		<p>that foot and vehicular traffic are minimized in these areas;</p> <p>2) By the end of the construction phase, the construction contractor shall permanently stabilize any erosion prone areas against erosion before decommissioning.</p>		
	<p>Construction activities could damage cultural and historical heritage resources or sites</p>	<p>1) Most critically at RPs, the contractor shall ensure that chance finds procedures are developed and implemented during the project construction phase; that watch briefs (on-site rapid assessment or observation during site clearances and earth works) by qualified personnel (cultural heritage specialist) are put in place to help locate possible chance finds; and that workers are aware of how to handle finds.</p>		
	<p>Workers brought in from outside could spread contagious diseases, bring in unfamiliar, unwanted customs and activities</p>	<p>1) The contractor shall hire as many workers as possible from local communities; that regular briefings take place for laborers coming from outside to raise awareness of issues, customs, and UWA requirements; and that there is an HIV/AIDS and COVID-19 awareness program in place for the workers.</p>		
	<p>The effects of a more erratic climate (hotter, unpredictable flood events) may impact construction activities and construction workers.</p>	<p>The contractor shall take precautions to minimize the risk to workers of heat-related issues, flash floods, and landslides. Potable water, shade, rest periods, safety briefings, and provision of food (if that is part of the contract) to eliminate the risks, should be considered.</p>		

<p>Design, Construction, Operation of Construction Camp (UWA responsibility for handling construction camps or alternatives for housing workers)</p>	<p>Although not yet determined if construction camps will be needed, impacts could result from construction and operation, similar to small-scale construction projects (construction Phase destruction of vegetation, erosion, operation issues waste disposal, water use; and closure issues)</p>	<p>1) If worker camps will be constructed, the contractor, with guidance from UWA, will be responsible for the proper siting, design, construction, and operation Impacts shall be identified and mitigation measures proposed and implemented for all the impacts of having a camp in the park.</p>		
<p>Completion of construction</p>	<p>If excess construction material and trash are not removed, and if vegetation, slopes, and preconstruction conditions are not restored, long-term damage could result.</p>	<p>1) UWA shall ensure that before contractor decommissions each Site, the area is restored to pre-construction conditions or improved conditions and shall certify that the area has been well restored</p>		

# GENDER AND SOCIAL PLAN

## Acknowledgement

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Subcontracting Firm: \_\_\_\_\_

*The undersigned have read and concur with this Gender Plan:*

\_\_\_\_\_  
Subcontractor Project Manager Date

\_\_\_\_\_  
Subcontractor Construction Superintendent Date

\_\_\_\_\_  
Subcontractor Quality Control Manager Date

\_\_\_\_\_  
Subcontractor Site Safety Manager Date

\_\_\_\_\_  
Subcontractor Civil Foreman Date

\_\_\_\_\_  
Subcontractor Mechanical Foreman Date

\_\_\_\_\_  
Subcontractor Electrical Foreman Date

## **I. Purpose**

The Gender Plan (GP) is intended to comply with the requirements defined in Uganda's Employment Act of 2006 and to eliminate gender-based discrimination during implementation of the construction activities in Uganda Wildlife Authority's, Kidepo Valley National Park. This plan will identify and examine gender-related disparities in the construction sector to create a safe, healthy environment for all employees, customers, and visitors.

We will thoroughly assess hazards and risk management practices to minimize the potential for gender-based discrimination. This plan outlines a comprehensive approach to promote gender equality by:

- Preventing sexual harassment during construction implementation
- Creating an appropriate response mechanism for any incidence of discrimination or GBV
- Empowering women with job opportunities
- Ensuring construction sites provide clean, safe sanitation facilities for both men and women

## **2. Roles and Responsibilities**

Subcontractor Project Manager: *(Name, phone)* \_\_\_\_\_

*Responsible for implementing and updating the Construction Health and Safety Plan and all contract-related matters.*

Subcontractor Construction Superintendent: *(Name, phone)* \_\_\_\_\_

*Responsible for supervision of construction activities on a daily basis, compliance with construction specification, and the accuracy of as-built drawings. The Construction Superintendent will also be responsible for ensuring compliance with all gender-based protocols defined in this Gender Plan.*

## **3. Workplace Requirements**

### **3.1. Sanitation Facilities**

We will maintain sanitary toilets and washrooms on site specifically for women's use. These will be external structures with functional locks. We will ensure 1 toilet is provided for every 20 staff members, with a minimum of 1 toilet for men and 1 for women. Clean toilet paper and sanitary receptacles will be within reach of the toilet, with hand-washing facilities in close proximity to the toilet facilities. The hand-washing stations will also be gender-separate. If changing rooms are provided on construction sites, there will also be a separate, locking facility provided strictly for women.

We will arrange for housing that meet's Ugandan housing and safety standards. Women will have separate dwellings and sanitation facilities with functional locks. These shall be safe, clean, and adequately sized.

### **3.2. Workplace Culture**

We will maintain a strict zero-tolerance policy with regard to sexual harassment, gender-based discrimination, and GBV. In the event of a gender-related incident, we will immediately remove offenders from the site and employment may be terminated. We will require all employees to complete a GBV training session.

### 3.3. Reporting Mechanism

Any person that experiences or witnesses sexual harassment, discrimination, exploitation, or GBV on site, at project offices, in temporary accommodations, or anywhere else within the context of the B4R project, will report it to their supervisor or the B4R Clerk of Works (COW). We accept responsibility for recording, reporting, and investigating all instances of gender-based conflict, whether they were expressed in writing, verbally, or anonymously. We will submit all complaints to the COW and the Construction Civil Engineer who will monitor the investigation. If we determine there has been gender-based harassment, violence, or exploitation, we will terminate employment with the offender.

### 3.4. Labor Rights

We will never engage in any form of Trafficking in Persons, use misleading or fraudulent recruiting practices, or use any forced labor. We will provide all employees with an employment contract or document in writing and in a language they understand. We will never destroy, conceal, confiscate or otherwise deny employees access to their identity documents.

### 3.5. Workplace Signage

We will post and maintain a sign at each project site that summarizes policy requirements for gender inclusion, labor practices, and sanitation facilities. We will post it in a location visible to employees in both English and Kiswahili.

### 3.6. Visitors

If a visitor does not comply with gender policy requirements at the construction site, we may request the individual leave the site. We will report the incident to the COW.

## 4. Gender Inclusion Staffing Targets

We expect to hire a total of \_\_\_ (#) \_\_\_ of people for this project.

The following are vulnerable populations that we expect to hire for the project and associated staffing.

Vulnerable Population	Local % Population	Target Number of Positions
Women	50%	
(describe)		
(describe)		

*Please describe here the specific actions you will take to achieve the above targets.*

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## CLOSE-OUT CHECKLIST

	Electronic File	Hard Copy
<b>SUBCONTRACT FILES</b>		
Original Contract	✓	✓
Amendments / Contract Directives	✓	✓
<b>CONSTRUCTION SUBMITTALS</b>		
Completed Submittal Register	✓	
Initial Submittals (Schedule, CQCP, HSSP, GP)	✓	
Submittals (Testing and Materials, as required)	✓	
Schedule Updates	✓	
Contractor's Daily Reports	✓	
As-Built Drawings	✓	
Project Operations Manual	✓	
<b>REQUEST FOR INFORMATION (RFI)</b>		
RFI Register	✓	
RFIs	✓	
<b>CONSTRUCTION DOCUMENTS</b>		
Clerk of Works Daily Reports	✓	
Weekly Reports	✓	
Monthly Progress Reports	✓	
Non-Compliance Reports	✓	
<b>PROGRESS PAYMENTS</b>		
Construction Activity Completion Reports	✓	
Approved Payments	✓	
<b>CLOSE-OUT DOCUMENTS</b>		
Joint Final Inspection Punchlist / Approval	✓	
USAID Letter of Acceptance	✓	
Certificate of Completion	✓	
Certificate of Warranty	✓	
Final Release and Indemnity	✓	
	✓	