

**INFRASTRUCTURE FOR BIODIVERSITY  
CONSERVATION IN KIDEPO VALLEY  
NATIONAL PARK**

**Construction of Four (04) Low Water  
Stream Crossings**

**BIDDING DOCUMENTS  
VOLUME 5 OF 5  
BILLS OF QUANTITIES**

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*March 2023*

**USAID - Infrastructure for Biodiversity Conservation in Kidepo Valley  
National Park  
CONSTRUCTION OF LOW WATER STREAM CROSSINGS**

**DOCUMENTS SUMMARY PAGE**

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# **LOW WATER STREAM CROSSINGS**

## **GRAND SUMMARY**

**BIODIVERSITY INFRASTRUCTURE IN KIDEPO VALLEY NATIONAL PARK**

**UGANDA WILDLIFE AUTHORITY- FOUR LOW WATER STREAM CROSSINGS**

**LWSC - GENERAL SUMMARY**

	<b>AMOUNT</b>	<b>Units</b>	<b>TOTAL AMOUNT (Ugx)</b>
BILL No. 1 : PRELIMINARIES			-
BILL No. 2 : KALABE			-
BILL No. 3 : KURAO			-
BILL No. 4 : TONGOBORE			-
BILL No. 5 : NAKAO			-
BILL No. 6 : DAYWORKS			-
<b>SUB-TOTAL 1</b>			-
ADD PROVISIONAL SUM FOR CONTINGENCY (5%)			-
<b>SUB - TOTAL 2</b>			-
			-
<b>GRAND TOTAL</b>			-

**LOW WATER STREAM  
CROSSINGS**

PRELIMINARIES

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY  
NATIONAL PARK**

**BILL NO. 1 PRELIMINARIES**

Item	Description	Unit	Qty	Rate	Amount
11.01	<p><b>DEFINITION AND TERMS</b></p> <p><b>Preamble:</b> These Preliminaries shall apply to all Volumes of tender and Contract Documents for the project and supplement specification</p> <p><b>Names of Parties</b> The following parties wherever they occur shall be interpreted as here under:</p> <p>(i) <b>The Word "Employer"</b> shall be held to mean: <b>Uganda Wildlife Authority</b></p> <p>(ii) The "Project Manager" for the purposes of this Contract shall be held to mean:: <b>Uganda Wildlife Authority</b></p> <p>(iii) <b>The "Contractor" shall mean:</b> The person or persons partnership, firm or company, whose tender for this work (i.e. the work described in and/or preferred to in Bills of Quantities) has been accepted and shall include the legal successors in title to such person or persons, partnership, firm or company but not (except with consent of the Employer) any assignee(s).</p> <p>(iv) The "<b>Funder</b>" shall be held to mean: <b>United States Agency for International Development (USAID)</b></p> <p>(v) The "<b>Quality Assurance Consultant</b>" shall mean: <b>MBW Consulting Ltd.</b></p> <p>Meaning and Abbreviations</p> <p>(viii) "<b>Ditto</b>" shall have the same meaning as "As before".</p> <p>(ix) "<b>CM</b>" or <b>M<sup>3</sup></b> shall mean Cubic Metres</p> <p>(x) "<b>SM</b>" or <b>M<sup>2</sup></b> shall mean Square Metres</p> <p>(xi) "<b>LM</b>" or <b>M</b> shall mean Linear Metres</p> <p>(xii) "<b>NO.</b>" shall mean Number</p> <p>(xiii) "<b>Prs</b>" shall mean Pairs</p> <p>(xiv) "<b>mm</b>" shall mean Millimetres</p> <p>(xv) "<b>KG</b>" shall mean Kilograms(s)</p> <p>(xv) "<b>MTH</b>" or "<b>mth</b>" shall mean Month(s)</p> <p>(xix) "<b>Approx.</b>" shall mean Approximately</p> <p>(xx) "<b>U.S.</b>" shall mean United States of America</p> <p>(xxi) "<b>E.U.</b>" shall mean European Union</p>				

Item	Description	Unit	Qty	Rate	Amount
12	<b>GENERAL REQUIREMENTS AND PROVISIONS</b>				
12.01	<b>Tenderer to Visit the Site</b> The Contractor will be required to visit the site before tendering. Permission to view the site may be obtained upon application to the Project Manager. The Contractor shall therefore be deemed to have visited the site and satisfied himself as to: -	Item	1		
(a)	The nature of the site				
(b)	The amount of rubbish or debris to be cleared away before commencement.				
(c)	The nature of the soil to be excavated and location of the dumping site.				
(d)	The nature, proximity of adjoining property, structures, buildings and services to be protected and/or diverted.				
(f)	The nature of existing structures to be retained or demolished				
(g)	The erection and siting of all temporary structures, plant and materials necessary for executing the Works.				
(h)	The existence of adequate supplies of labour, plant and local materials.				
(i)	The requirements for the protection of the environment.				
(j)	The Contractor is to satisfy himself as to any difficulties that the Site may present to make all necessary inquiries to any point which in his opinion requires further elucidation as no claim for lack of information will be accepted.				
12.03	Maintenance of existing road				
(a)	Contractor to maintain existing road	month	18		
(b)	Additional grading of existing road as instructed by the Engineer	km	1		
b(i)	Provide temporary access and/or motorable diversions crossing routes and removal upon completion of the work for all the crossing approved by the Engineer	LS	1		
	<b>CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</b>				
	Contractor's Preliminary and General Obligations Note:				
13.01	The sum of Items 13.01(a) + 13.01 (b) must not exceed 15% of the Total Tender Sum				
(a)	Fixed obligations (including but not limited to all insurances, sign boards, hoarding)	L.S.	1		
(b)	Time-related obligations (including but not limited to security, water, electricity, internet, telephone, site administration site meetings, sanitation, material storage)	month	18		
13.02	Provide, erect, and remove after use, temporary information boards	no.	6		

Item	Description	Unit	Qty	Rate	Amount
	<b>ENGINEER'S ACCOMMODATION AND ATTENDANCE UPON ENGINEER AND HIS/HER SITE PERSONNEL</b>				
14.02	<b>Office for the Engineer</b>				
(a)	Provide fully furnished and equipped office for the Engineer	no.	2		
(b)	Maintain and pay all rents and municipal services for office	mth	18		
14.09	Laboratory equipment for the Engineer				
	Allow for expenses in connection with the testing of materials as required by the Project Manager including the supply and preparation of materials to be tested, the cost of materials and their packing and conveyance to the nearest approved testing laboratory.				
(c)	Allow for making all necessary concrete test cubes and testing at an approved laboratory. One copy of the test cube report shall be forwarded direct to the Project Manager by the Laboratory officials. An accurate record of all test cubes taken and crushed must be kept on site and the Contractor will only be reimbursed for successful tests upon the production of Laboratory Certificates.	L.S.	1		-
	<b>Accommodation Of Traffic</b>				
15.01	Accommodation of traffic on existing road				
(a)	Provision of Traffic Management and Control Signs	No.	5		
	<b>ENVIRONMENTAL PROTECTION AND WASTE DISPOSAL</b>				
17.01	Environmental action plan, decommissioning plans and reporting	L.S.	1		



Item	Description	Unit	Qty	Rate	Amount
	<b>OCCUPATIONAL HEALTH AND SAFETY, HIV/AIDS, COVID 19 AND GENDER</b>				
18.01	HIV/AIDS and STD prevention and counselling				
(a)	Information, education and consultation campaigns including regular distribution of condoms to workforce	mth	18		
(b)	Provide, maintain and operate STD and HIV/AIDS clinic or make alternative arrangements with existing local clinic	mth	18		
(c)	Provision of safety clothing and equipment for the workforce	mth	18		
	Allow for routine sensitization of all worker and personnel on prevention of the spread of COVID 19. Provide all				
(d)	Personel Protective equipment and safety gear for all workers on the sites to prevent the Spread of COVID19. Maintaining of SOPs guidelines from MoH.	L.S.	1		
	<b>TOTAL OF BILL NO 1 CARRIED TO GRAND SUMMARY</b>				-

**LOW WATER STREAM  
CROSSINGS**

KALABE LWSC

.

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY  
NATIONAL PARK**

**BILL No. 2 KALABE LWSC**

Item	Description	Unit	Quantity	Rate	Amount
	<b>SECTION 2100: DRAINS ON 300M ROAD LENGTH BEFORE AND AFTER THE DRIFT</b>				
21.01	Excavation for open drains:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	up to 1.5 m	m <sup>3</sup>	360		
(b)	Extra over sub-Item 21.03(a) for excavation in rock as defined in Clause 3603, irrespective of depth:	m <sup>3</sup>	50		
21.02	Clearing and shaping existing drains:	m <sup>3</sup>	600		
	<b>SECTION 2200: PREFABRICATED CULVERTS</b>				
22.01	Excavation:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	Up to 1.5 m	m <sup>3</sup>	40		
(ii)	Exceeding 1.5 m and up to 3.0 m	m <sup>3</sup>	5		
(b)	Extra over sub-Item 22.01(a) for excavation in rock as defined in Clause 3603, irrespective of depth (Provisional)	m <sup>3</sup>	5		
22.02	Backfilling:				
(a)	Using excavated material	m <sup>3</sup>	18		
(b)	Using imported selected material	m <sup>3</sup>	35		
22.03	Concrete pipe culverts:				
(a)	On Class A bedding (type & diameter indicated)				
(a)(i)	Precast 600mm diameter	m	21		
22.07	Cast in-situ concrete and formwork:				
(a)	Class 15/40 concrete in Class A culvert bedding, screeds, haunching and encasing for pipes, including formwork	m <sup>3</sup>	7		
(c)	Class 25/20 concrete in inlet and outlet structures, catchpits, manholes, thrust and anchor blocks, excluding formwork but including Class U2 surface finish	m <sup>3</sup>	8		
(d)	Formwork to concrete under sub item 22.07(c) above (class of finish indicated)				
(d)(ii)	Class F2	m <sup>2</sup>	65		
22.1	Steel reinforcement:				
(b)	High-tensile steel bars	kg	950		

Item	Description	Unit	Quantity	Rate	Amount
<b>SECTION 2500: PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION</b>					
25.01	Stone pitching:				
(b)	Grouted stone pitching, 1:3 cement sand mortar				
(i)	200mm	m <sup>2</sup>	78		
<b>SECTION 2600: GABIONS</b>					
26.02	Surface preparation for bedding the gabions	m <sup>2</sup>	526		
26.03	Gabions:				
(a)	Galvanised gabion boxes filled with appropriet rockfill (dimensions of box and mesh size indicated)				
(i)	2m x 1m x 0.5m, 80mm x 100mm mesh	m <sup>3</sup>	320		
(c)	Galvanised gabion mattresses (dimensions of mattress, mesh size indicated )				
(c)(i)	3m x 2m x 0.3m, 80mm x 100mm mesh Mattress	m <sup>3</sup>	26		
<b>COLLECTION TO SUMMARY</b>					
<b>SECTION 3200: REMOVAL OF EXISTING STRUCTURES</b>					
32.01	Removal of existing structures:				
(b)	Removal/demolition of reinforced concrete in drifts, box culverts, rockfill and slabs including headwalls, wingwalls and apron and arrange as fill material and store on site to be re-used as directed	m <sup>3</sup>	108		
	Carefully remove existing collapsed tree average trunk girth over 1200mm but not exceeding , 4000mm tall including uprooting of root structure and removal of all branches	Item	1		
<b>SECTION 3600: EARTHWORKS FOR ROAD SECTIONS 300M TO AND FROM DRIFT</b>					
36.01	Excavations:				
(a)(i)	Excavation of Road Formation to spoil	m <sup>3</sup>	1,250		
(a)(ii)	Excavation of soil in river training to spoil	m <sup>3</sup>	8,800		
(c)	Rock excavation				
(c)(i)	Rock excavation to spoil	m <sup>3</sup>	30		
36.02	Fill and improved subgrade layers				
(b)	Improved Subgrade layers as Specified in the Drawings using G7 Quality Material	m <sup>3</sup>	1,580		
37.03	Natural gravel for gravel wearing course and unpaved shoulders:				
(b)	Gravel class G30 used for gravel wearing course	m <sup>3</sup>	2,100		
<b>COLLECTION TO SUMMARY</b>					

Item	Description	Unit	Quantity	Rate	Amount
	<b>SECTION 5400: ROAD SIGNS</b>				
54.01	GRP Road signs on steel posts				
(a)	Road signs on single post, plate area "A"				
(i)	A ≤ 0.5m <sup>2</sup>	No.	4		
(ii)	A > 0.5m <sup>2</sup>	No.	4		
56.04	Grassing				
(a)	Plant approved paspalum grassing using cuttings, sods or seeds in the areas prepared for grassing including watering planted grass twice a day with adequate amounts; sprays water until the grass has achieved an acceptable cover (meaning not less than 75% of the area grassed shall be covered with grass and no bare patches exceeding 0.25m <sup>2</sup> per square meter shall occur) including providing loam soil and manure	m <sup>2</sup>	60		
	<b>COLLECTION TO SUMMARY</b>				-
	<b>SECTION 6100: FOUNDATIONS FOR DRIFT</b>				
61.02	Excavation:				
(a)	Common excavation in soft material situated within the following successive depth ranges				
(i)	0 m up to 2 m	m <sup>3</sup>	324		
(b)	Extra-over sub-Item 61.02(a) for excavation in rock irrespective of depth	m <sup>3</sup>	20		
61.04	Backfill to excavations utilising:				
(a)	Material from the excavations	m <sup>3</sup>	80		
61.05	Foundation fill consisting of:				
(a)	Rock fill in foundations	m <sup>3</sup>	160		
(a)(i)	Rock fill in rip rap	m <sup>3</sup>	470		
(b)	Imported material 'gravel class G30'	m <sup>3</sup>	190		
(c)	Sand blinding	m <sup>3</sup>	6		
	<b>GEO GRIDS AND FABRICS.</b>				
(a)	Secugrid 80/20 R6 to engineers detail	m <sup>2</sup>	30		
	<b>DAMP PROOF COURSES</b>				
(b)	1000 Gauge polythene sheeting laid on blinded hardcore	m <sup>2</sup>	360		

Item	Description	Unit	Quantity	Rate	Amount
	<b>SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH</b>				
62.01	Formwork to provide surface finish Class F1 to concealed surfaces to:				
(a)	Beams	m <sup>2</sup>	140		
(b)	Culvert walls	m <sup>2</sup>	125		
(c)	Soffit of suspended culvert slab	m <sup>2</sup>	36		
(d)	Sides of pillars	m <sup>2</sup>	52		
	<b>SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES</b>				
63.01	High Yield Steel reinforcement for:				
(a)	Beams and culvert				
(i)	T10	Kg	3150		
(ii)	T12	Kg	1,920		
(iii)	T16	Kg	6,170		
(b)	Rigid Pavement				
(ii)	welded steel fabric(A252 Fabric Mesh reinforcement weighing 3.95 kg. per square meter fixed in slab)	Kg	968		
	<b>SECTION 6400: CONCRETE</b>				
64.01	Cast in situ concrete Class 30 in				
(a)	Culvert	m <sup>3</sup>	35		
(b)	Beams	m <sup>3</sup>	15		
(c)	Pavement Slab and topping	m <sup>3</sup>	40		
(d)	Pillars	m <sup>3</sup>	9		
(e)	Splash apron	m <sup>3</sup>	18		
64.02	Cast in situ concrete Class 15 in				
(a)	Blinding	m <sup>3</sup>	5		
6600	<b>No-Fines Concrete; Joints; Bearings;</b>				
B66.05	Expansion joints				
(a)	Elastomeric strip sealant expansion joints 20mm thick 200mm wide masterflex pg or approved water proof sealant on top of and including filler styro foam	m	16		
66.14	Dowel bars				
(a)	20mm diameter x 400mm long smooth round dowel bar, with the end of the bars be coated wit a bond breaker to enable free movement, waterproof cap and approved shealth	no.	54		
66.21	Synthetic fibre filter fabric				
(a)	(a) Provide (geo textile) filter membrane polyfelt T%500 similar approved	m <sup>2</sup>	140		
	<b>COLLECTION TO SUMMARY</b>				
					-

UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY  
NATIONAL PARK

SUMMARY KALABE LWSC

ITEM	DESCRIPTION	AMOUNT (Ugx)
A	DRAINAGE	-
B	EARTHWORKS AND PAVEMENTS	-
C	AUXILLARY WORK	-
D	STRUCTURES (DRIFT)	-
	TOTAL CARRIED TO GENERAL SUMMARY	-

**LOW WATER STREAM  
CROSSINGS**

KURAO LWSC



**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY  
NATIONAL PARK**

**BILL No. 3 KURAO LWSC**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
	<b>SECTION 2100: DRAINS ON 300M ROAD LENGTH BEFORE AND AFTER THE DRIFT</b>				
21.01	Excavation for open drains:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	up to 1.5 m	m <sup>3</sup>	360		
(b)	Extra over sub-Item 21.03(a) for excavation in rock as defined in Clause 3603, irrespective of depth:	m <sup>3</sup>	50		
21.02	Clearing and shaping existing drains:	m <sup>3</sup>	600		
	<b>SECTION 2200: PREFABRICATED CULVERTS</b>				
22.01	Excavation:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	Up to 1.5 m	m <sup>3</sup>	15		
(ii)	Exceeding 1.5 m and up to 3.0 m	m <sup>3</sup>	5		
(b)	Extra over sub-Item 22.01(a) for excavation in rock as defined in Clause 3603, irrespective of depth (Provisional)	m <sup>3</sup>	5		
22.02	Backfilling:				
(a)	Using excavated material	m <sup>3</sup>	5		
(b)	Using imported selected material	m <sup>3</sup>	12		
22.03	Concrete pipe culverts:				
(a)	On Class A bedding (type and diameter indicated)				
(a)(i)	Precast 600mm diameter	m	6		
22.07	Cast in-situ concrete and formwork:				
(a)	Class 15/40 concrete in Class A culvert bedding, screeds, haunching and encasing for pipes, including formwork	m <sup>3</sup>	2		
(c)	Class 25/20 concrete in inlet and outlet structures, catchpits, manholes, thrust and anchor blocks, excluding formwork but including Class U2 surface finish	m <sup>3</sup>	4		
(d)	Formwork to concrete under sub item 22.07(c) above (class of finish indicated)				
(d)(ii)	Class F2	m <sup>2</sup>	24		
22.1	Steel reinforcement:				
(b)	High-tensile steel bars	kg	600		

Item	Description	Unit	Quantity	Rate	Amount
<b>SECTION 2500: PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION</b>					
25.01	Stone pitching:				
(b)	Grouted stone pitching, 1:3 cement sand mortar				
(i)	200mm	m <sup>2</sup>	60		
<b>SECTION 2600: GABIONS</b>					
26.02	Surface preparation for bedding the gabions	m <sup>2</sup>	240		
26.03	Gabions:				
(a)	Galvanised gabion boxes filled with appropriet rockfill (dimensions of box and mesh size indicated)				
(i)	2m x 1m x 0.5m, 80mm x 100mm mesh	m <sup>3</sup>	150		
(c)	Galvanised gabion mattresses (dimensions of mattress, mesh size indicated )				
(c)(i)	3m x 2m x 0.3m, Mattress	m <sup>3</sup>	50		
<b>COLLECTION TO SUMMARY</b>					
					-
<b>SECTION 3200: REMOVAL OF EXISTING STRUCTURES</b>					
32.01	Removal of existing structures:				
(b)	Removal/demolition of reinforced concrete in drifts, box culverts and slabs including headwalls, wingwalls and apron and arrange as fill material and store on site to be re-used as directed	m <sup>3</sup>	80		
<b>SECTION 3600: EARTHWORKS FOR ROAD SECTIONS 300M TO AND FROM DRIFT</b>					
36.01	Excavations:				
(a)	Common excavation to spoil	m <sup>3</sup>	5,618		
(b)	Excavation in sandy soil for river training <b>(Provisional Item)</b>	m <sup>3</sup>	55		
(c)	Rock excavation	m <sup>3</sup>	120		
36.02	Fill and improved subgrade layers				
(b)	Improved Subgrade layers as Specified in the Drawings using G7 Quality Material	m <sup>3</sup>	580		

Item	Description	Unit	Quantity	Rate	Amount
	<b>SECTION 3700: PAVEMENT LAYERS OF NATURAL GRAVEL MATERIALS</b>				
37.03	Natural gravel for gravel wearing course and unpaved shoulders:				
(b)	Gravel class G30 used for gravel wearing course	m <sup>3</sup>	630		
	<b>COLLECTION TO SUMMARY</b>				-
	<b>SECTION 5400: ROAD SIGNS</b>				
54.01	GRP Road signs on steel posts				
(a)	Road signs on single post, plate area "A"				
(i)	A ≤ 0.5m <sup>2</sup>	No.	4		
(ii)	A > 0.5m <sup>2</sup>	No.	4		
56.04	Grassing				
(a)	Plant approved paspalum grassing using cuttings, sods or seeds in the areas prepared for grassing including watering planted grass twice a day with adequate amounts; sprays water until the grass has achieved an acceptable cover (meaning not less than 75% of the area grassed shall be covered with grass and no bare patches exceeding 0.25m <sup>2</sup> per square meter shall occur) including providing loam soil and manure	m <sup>2</sup>	50		
	<b>COLLECTION TO SUMMARY</b>				-
	<b>SECTION 6100: FOUNDATIONS FOR DRIFT</b>				
61.02	Excavation:				
(a)	Common excavation in soft material situated within the following successive depth ranges including river training of total 400m on either side of the road:				
(i)	0 m up to 2 m	m <sup>3</sup>	180		
(b)	Extra-over sub-Item 61.02(a) for excavation in rock irrespective of depth	m <sup>3</sup>	100		
61.04	Backfill to excavations utilising:				
(a)	Material from the excavations				
(b)	Imported material	m <sup>3</sup>	40		
(c)	Sand blinding	m <sup>3</sup>	5		
	<b>GEO GRIDS AND FABRICS.</b>				
(a)	Secugrid 80/20 R6 to engineers detail	m <sup>2</sup>	50		
	<b>DAMP PROOF COURSES</b>				
(b)	1000 Gauge polythene sheeting laid on blinded hardcore	m <sup>2</sup>	80		
61.05	Foundation fill consisting of:				
(a)	Rock fill	m <sup>3</sup>	100		

Item	Description	Unit	Quantity	Rate	Amount
	<b>SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH</b>				
62.01	Formwork to provide surface finish Class F1 to concealed surfaces to:				
(a)	Beams	m <sup>2</sup>	38		
(b)	Pavement Slab	m <sup>2</sup>	12		
(c)	Sides of pillars	m <sup>2</sup>	40		
	<b>SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES</b>				
63.01	High Yield Steel reinforcement for:				
(a)	Beams				
(i)	T10	Kg	2,060		
(ii)	T12	Kg	1,040		
(iii)	T16	Kg	1,040		
(b)	Rigid Pavement				
(ii)	welded steel fabric(A252 Fabric Mesh reinforcement weighing 3.95 kg. per square meter fixed in slab)	Kg	480		
	<b>SECTION 6400: CONCRETE FOR STRUCTURES</b>				
64.01	Cast in situ concrete Class 30 in				
(a)	Beams	m <sup>3</sup>	10		
(b)	Pavement Slab	m <sup>3</sup>	20		
(c)	Pillars	m <sup>3</sup>	6		
6600	<b>No-Fines Concrete; Joints; Bearings; Parapets And Drainage For Structures</b>				
B66.05	Expansion joints				
(a)	Elastomeric strip sealant expansion joints 20mm thick 200mm wide masterflex pg or approved water proof sealant on top of and including filler styro foam	m	16		
66.14	Dowel bars				
(a)	20mm diameter x 400mm long smooth round dowel bar, with the end of the bars be coated wit a bond breaker to enable free movement, waterproof cap and approved shealth	no.	54		
66.21	Synthetic fibre filter fabric				
(a)	(a) Provide (geo textile) filter membrane polyfelt T%500 similar approved	m <sup>2</sup>	42		
	<b>COLLECTION TO SUMMARY</b>				-

UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO  
VALLEY NATIONAL PARK

SUMMARY KURAO LWSC

ITEM	DESCRIPTION	AMOUNT (Ugx)
A	DRAINAGE	-
B	EARTHWORKS AND PAVEMENTS	-
C	AUXILLARY WORK	-
D	STRUCTURES (DRIFT)	-
	<b>TOTAL CARRIED TO GENERAL SUMMARY</b>	-

**LOW WATER STREAM  
CROSSINGS**

TONGOBORE LWSC

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY  
NATIONAL PARK**

**BILL No. 4 TONGOBORE LWSC**

Item	Description	Unit	Quantity	Rate	Amount
	<b>SECTION 2100: DRAINS ON 300M ROAD LENGTH BEFORE AND AFTER THE DRIFT</b>				
21.01	Excavation for open drains:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	up to 1.5 m	m <sup>3</sup>	360		
(b)	Extra over sub-Item 21.03(a) for excavation in rock as defined in Clause 3603, irrespective of depth:	m <sup>3</sup>	50		
21.02	Clearing and shaping existing drains:	m <sup>3</sup>	600		
	<b>SECTION 2500: PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION</b>				
25.01	Stone pitching:				
(b)	Grouted stone pitching, 1:3 cement sand mortar				
(i)	200mm	m <sup>2</sup>	45		
	<b>SECTION 2600: GABIONS</b>				
26.02	Surface preparation for bedding the gabions	m <sup>2</sup>	180		
26.03	Gabions:				
(a)	Galvanised gabion boxes filled with appropriet rockfill (dimensions of box and mesh size indicated)				
(i)	2m x 1m x .5m mesh	m <sup>3</sup>	66		
(c)	Galvanised gabion mattresses (dimensions of mattress, mesh size indicated )				
(c)(i)	3m x 2m x 0.3m, Mattress	m <sup>3</sup>	40		
	<b>COLLECTION TO SUMMARY</b>				-
	<b>SECTION 3200: REMOVAL OF EXISTING STRUCTURES</b>				
32.01	Removal of existing structures:				
(b)	Removal/demolition of reinforced concrete in drifts, box culverts, rockfill and slabs including headwalls, wingwalls and apron and arrange as fill material and store on site to be re-used as directed	m <sup>3</sup>	160		

Item	Description	Unit	Quantity	Rate	Amount
<b>SECTION 3600: EARTHWORKS FOR ROAD SECTIONS 300M TO AND FROM DRIFT</b>					
36.01	Excavations:				
(a)	Common excavation of Road Formation to spoil	m <sup>3</sup>	3,260		
(b)	Excavation in sandy soil for river training <b>(Provisional Item)</b>	m <sup>3</sup>	800		
(c)	Rock excavation	m <sup>3</sup>	1,145		
36.02	Fill and improved subgrade layers				
(b)	Improved Subgrade layers as Specified in the Drawings using G7 Quality Material	m <sup>3</sup>	600		
<b>SECTION 3700: PAVEMENT LAYERS OF NATURAL GRAVEL MATERIALS</b>					
37.03	Natural gravel for gravel wearing course and unpaved shoulders:				
(b)	Gravel class G30 used for gravel wearing course	m <sup>3</sup>	630		
<b>COLLECTION TO SUMMARY</b>					
<b>SECTION 5400: ROAD SIGNS</b>					
54.01	GRP Road signs on steel posts				
(a)	Road signs on single post, plate area "A"				
(i)	A ≤ 0.5m <sup>2</sup>	No.	4		
(ii)	A > 0.5m <sup>2</sup>	No.	4		
56.04	Grassing				
(a)	Plant approved paspalum grassing using cuttings, sods or seeds in the areas prepared for grassing including watering planted grass twice a day with adequate amounts; sprays water until the grass has achieved an acceptable cover (meaning not less than 75% of the area grassed shall be covered with grass and no bare patches exceeding 0.25m <sup>2</sup> per square meter shall occur) including providing loam soil and manure	m <sup>2</sup>	200		
<b>COLLECTION TO SUMMARY</b>					
					-
					-



Item	Description	Unit	Quantity	Rate	Amount
	<b>SECTION 6100: FOUNDATIONS FOR DRIFT</b>				
61.02	Excavation:				
(a)	Common excavation in soft material situated within the following successive depth ranges including river training of total 400m on either side of the road:				
(i)	0 m up to 2 m	m <sup>3</sup>	300		
(b)	Extra-over sub-Item 61.02(a) for excavation in rock irrespective of depth	m <sup>3</sup>	80		
61.04	Backfill to excavations utilising:				
(a)	Material from the excavations				
(b)	Imported material 'gravel class G30'	m <sup>3</sup>	70		
(c)	Sand blinding	m <sup>3</sup>	3		
	<b>GEO GRIDS AND FABRICS.</b>				
(a)	Secugrid 80/20 R6 to engineers detail	m <sup>2</sup>	40		
	<b>DAMP PROOF COURSES</b>				
(b)	1000 Gauge polythene sheeting laid on blinded hardcore	m <sup>2</sup>	55		
61.05	Foundation fill consisting of:				
(a)	Rock fill	m <sup>3</sup>	70		
	<b>SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH</b>				
62.01	Formwork to provide surface finish Class F1 to concealed surfaces to:				
(a)	Beams	m <sup>2</sup>	25		
(b)	Pavement Slab	m <sup>2</sup>	8		
(c)	Sides of pillars	m <sup>2</sup>	30		
	<b>SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES</b>				
63.01	High Yield Steel reinforcement for:				
(a)	Beams				
(i)	T10	Kg	620		
(ii)	T12	Kg	700		
(iii)	T16	Kg	1080		
(b)	Rigid Pavement				
(i)	T12	Kg	260		
(ii)	welded steel fabric(A252) Fabric Mesh reinforcement weighing 3.95 kg. per square meter fixed in slab)	Kg	200		

Item	Description	Unit	Quantity	Rate	Amount
	<b>SECTION 6400: CONCRETE FOR STRUCTURES</b>				
64.01	Cast in situ concrete Class 30 in				
(a)	Beams	m <sup>3</sup>	9		
(b)	Pavement Slab	m <sup>3</sup>	16		
(c)	Pillars	m <sup>3</sup>	5		
6600	<b>No-Fines Concrete; Joints; Bearings; Parapets And Drainage For Structures</b>				
B66.05	Expansion joints				
(a)	Elastomeric strip sealant expansion joints 20mm thick 200mm wide masterflex pg or approved water proof sealant on top of and including filler styro foam	m	8		
66.14	Dowel bars				
(a)	20mm diameter x 400mm long smooth round dowel bar, with the end of the bars be coated wit a bond breaker to enable free movement, waterproof cap and approved shealth	no.	24		
66.21	Synthetic fibre filter fabric				
(a)	(a) Provide (geo textile) filter membrane polyfelt T%500 similar approved	m <sup>2</sup>	18		
	<b>COLLECTION TO SUMMARY</b>				-

UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY  
NATIONAL PARK

SUMMARY TONGOBORE LWSC

ITEM	DESCRIPTION	AMOUNT (Ugx)
A	DRAINAGE	-
B	EARTHWORKS AND PAVEMENTS	-
C	AUXILLARY WORK	-
D	STRUCTURES (DRIFT)	-
	<b>TOTAL CARRIED TO GENERAL SUMMARY</b>	-

**LOW WATER STREAM  
CROSSINGS**

NAKAO LWSC

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY  
BILL No. 5 NAKAO LWSC**

Item	Description	Unit	Quantity	Rate	Amount
	<b>SECTION 2100: DRAINS ON 300M ROAD LENGTH BEFORE AND AFTER THE DRIFT</b>				
21.01	Excavation for open drains:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	up to 1.5 m	m <sup>3</sup>	360		
(b)	Extra over sub-Item 21.03(a) for excavation in rock as defined in Clause 3603, irrespective of depth:	m <sup>3</sup>	50		
21.02	Clearing and shaping existing drains:	m <sup>3</sup>	600		
	<b>SECTION 2500: PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION</b>				
25.01	Stone pitching:				
(b)	Grouted stone pitching, 1:3 cement sand mortar				
(i)	200mm	m <sup>2</sup>	40		
	<b>SECTION 2600: GABIONS</b>				
26.02	Surface preparation for bedding the gabions	m <sup>2</sup>	240		
26.03	Gabions:				
(a)	Galvanised gabion boxes filled with appropriet rockfill (dimensions of box and mesh size indicated)				
(i)	2m x 1m x .5m mesh	m <sup>3</sup>	90		
(c)	Galvanised gabion mattresses (dimensions of mattress, mesh size indicated )				
(c)(i)	3m x 2m x 0.3m, Mattress	m <sup>3</sup>	80		
	<b>COLLECTION TO SUMMARY</b>				-
	<b>SECTION 3200: REMOVAL OF EXISTING STRUCTURES</b>				
32.01	Removal of existing structures:				
(b)	Removal/demolition of reinforced concrete in drifts, box culverts and slabs including headwalls, wingwalls and apron and arrange as fill material and store on site to be re-used as directed	m <sup>3</sup>	100		

Item	Description	Unit	Quantity	Rate	Amount
<b>SECTION 3600: EARTHWORKS FOR ROAD SECTIONS 300M TO AND FROM DRIFT</b>					
36.01	Excavations:				
(a)	Common excavation of Road Formation to spoil <b>(Provisional Item)</b>	m <sup>3</sup>	6,004		
(b)	Excavation in sandy soil for river training <b>(Provisional Item)</b>	m <sup>3</sup>	1,740		
(c)	Rock excavation	m <sup>3</sup>	180		
36.02	Fill and improved subgrade layers				
(b)	Improved Subgrade layers as Specified in the Drawings using G7 Quality Material	m <sup>3</sup>	250		
<b>SECTION 3700: PAVEMENT LAYERS OF NATURAL GRAVEL MATERIALS</b>					
37.03	Natural gravel for gravel wearing course and unpaved shoulders:				
(b)	Gravel class G30 used for gravel wearing course	m <sup>3</sup>	630		
<b>COLLECTION TO SUMMARY</b>					
<b>SECTION 5400: ROAD SIGNS</b>					
54.01	GRP Road signs on steel posts				
(a)	Road signs on single post, plate area "A"				
(i)	A ≤ 0.5m <sup>2</sup>	No.	4		
(ii)	A > 0.5m <sup>2</sup>	No.	4		
56.04	Grassing; as described in the other sites				
(a)	Plant approved paspalum grassing using cutings, sods or seeds in the areas prepared for grassing ncluding watering planted grass twice a day with adequate amounts; sprays water until an acceptable cover as described before	m <sup>2</sup>	90		
<b>COLLECTION TO SUMMARY</b>					
<b>SECTION 6100: FOUNDATIONS FOR DRIFT</b>					
61.02	Excavation:				
(a)	Common excavation in soft material situated within the following successive depth ranges including river training of total 400m on either side of the road:				
(i)	0 m up to 2 m	m <sup>3</sup>	220		
(b)	Extra-over sub-Item 61.02(a) for excavation in rock irrespective of depth	m <sup>3</sup>	22		
61.04	Backfill to excavations utilising:				
(b)	Imported material	m <sup>3</sup>	240		
(c)	Sand blinding	m <sup>3</sup>	8		

Item	Description	Unit	Quantity	Rate	Amount
	<b>GEO GRIDS AND FABRICS.</b>				
(a)	Secugrid 80/20 R6 to engineers detail	m <sup>2</sup>	80		
	<b>DAMP PROOF COURSES</b>				
(b)	1000 Gauge polythene sheeting laid on blinded hardcore	m <sup>2</sup>	100		
61.05	Foundation fill consisting of:				
(a)	Rock fill	m <sup>3</sup>	100		
	<b>SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH</b>				
62.01	Formwork to provide surface finish Class F1 to concealed surfaces to:				
(a)	Beams	m <sup>2</sup>	60		
(b)	Pavement Slab	m <sup>2</sup>	15		
(c)	Sides of pillars	m <sup>2</sup>	50		
	<b>SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES</b>				
63.01	High Yield Steel reinforcement for:				
(a)	Beams, column and rigid pavements				
(i)	T10	kg	3650		
(ii)	T12	kg	1820		
(iii)	T16	kg	1800		
(b)	Rigid Pavement				
(ii)	welded steel fabric (A252 Fabric Mesh reinforcement weighing 3.95 kg. per square meter)	kg	280		
	<b>SECTION 6400: CONCRETE FOR STRUCTURES</b>				
64.01	Cast in situ concrete Class 30 in				
(a)	Beams	m <sup>3</sup>	16		
(b)	Pavement Slab	m <sup>3</sup>	26		
(c)	Pillars	m <sup>3</sup>	8		

Item	Description	Unit	Quantity	Rate	Amount
6600	<b>No-Fines Concrete; Joints; Bearings; Parapets And Drainage For Structures</b>				
B66.05	Expansion joints				
(a)	Elastomeric strip sealant expansion joints 20mm thick 200mm wide masterflex pg or approved water proof sealant on top of and including filler styro foam	m	8		
66.14	Dowel bars				
(a)	20mm diameter x 400mm long smooth round dowel bar, with the end of the bars be coated wit a bond breaker to enable free movement, waterproof cap and approved shealth	no.	28		
66.21	Synthetic fibre filter fabric				
(a)	(a) Provide (geo textile) filter membrane polyfelt T%500 similar approved	m <sup>2</sup>	32		
<b>COLLECTION TO SUMMARY</b>					
					-



**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY  
NATIONAL PARK**

**SUMMARY NAKAO LWSC**

ITEM	DESCRIPTION	AMOUNT (Ugx)
A	DRAINAGE	-
B	EARTHWORKS AND PAVEMENTS	-
C	AUXILLARY WORK	-
D	STRUCTURES (DRIFT)	-
	<b>TOTAL CARRIED TO GENERAL SUMMARY</b>	-

**LOW WATER STREAM  
CROSSINGS**

DAY WORKS

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO  
VALLEY NATIONAL PARK**

**BILL No. 6 DAY WORKS (ALL PROVISIONAL)**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount (Ugx)</b>
<b>SECTION 8100 : LABOUR</b>					
81.01	Unskilled labour	hour (hr)	500		-
81.02	Skilled labour	hour (hr)	250		-
81.03	Headman	hour (hr)	50		-
81.04	Foreman	hour (hr)	50		-
81.05	Engineer	hour (hr)	50		-
81.06	Site Manager	hour (hr)	50		-
81.07	Driver heavy	hour (hr)	100		-
81.08	Driver Light	hour (hr)	100		-
81.09	Plant Operator H/D	hour (hr)	100		-
81.10	Plant operator LH/D	hour (hr)	100		-
81.11	Land surveyor	hour (hr)	100		-
81.13	Mason	hour (hr)	50		-
81.14	Carpenter	hour (hr)	50		-
<b>SECTION 8200 : MATERIALS</b>					
82.01	Diesel (gas oil)	litre (l)	200		-
82.02	Petrol	litre (l)	200		-
82.03	Coarse crushed aggregate	tonne (t)	20		-
82.04	Fine aggregate (sand)	tonne (t)	20		-
82.05	Ordinary Portland Cement	tonne (t)	5		-
82.06	Mild steel reinforcement	tonne (t)	2		-
82.07	High yield stress steel bars	tonne (t)	2		-
82.08	Timbering for trenches	m <sup>2</sup>	50		-
82.09	Formwork	m <sup>2</sup>	50		-
82.10	Road Paint	litre (l)	100		-
82.11	Granular material	m <sup>3</sup>	100		-
82.15	Lubricant	kg	25		-
82.16	Lime	tonne (t)	2		-

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO  
VALLEY NATIONAL PARK**

**BILL No. 6 DAY WORKS (ALL PROVISIONAL)**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount (Ugx)</b>
	<b>SECTION 8300 : EQUIPMENT</b>				
83.01	D4 Dozer or equivalent with blade and ripper	hour (hr)	25		-
83.02	D8 Dozer or equivalent with blade and ripper	hour (hr)	25		-
83.03	Wheeled excavator, bucket capacity under 1 m <sup>3</sup>	hour (hr)	25		-
83.04	Track Loader, 3-4 m <sup>3</sup> bucket capacity	hour (hr)	25		-
83.05	Wheeled excavator, bucket capacity 1-2 m <sup>3</sup>	hour (hr)	25		-
83.06	Backhoe loader	hour (hr)	25		-
83.07	5t tipper lorry	hour (hr)	25		-
83.08	9t tipper lorry	hour (hr)	25		-
83.09	Dump Truck	hour (hr)	50		-
83.11	5-6t drawn vibrating roller and tractor	hour (hr)	20		-
83.12	10-12t smooth wheeled roller	hour (hr)	20		-
83.14	Pneumatic roller, 5,000 kg per tyre when fully ballasted	hour (hr)	20		-
83.15	Vibrating plate compactor	hour (hr)	20		-
83.16	Self-propelled water tanker min. 14,000 ltr. with pick-up pump	hour (hr)	20		-
83.17	Compressor 120 l/m complete with all tools	hour (hr)	20		-
83.18	Generator 15 kW	hour (hr)	20		-
83.19	Generator 150 kW	hour (hr)	20		-
83.20	Rock drill	hour (hr)	20		-
83.21	Concrete mixer up to 400 litres	hour (hr)	40		-
83.22	Concrete mixing plant, complete 1.0m <sup>3</sup> or above	hour (hr)	20		-
83.26	Pick-up truck	hour (hr)	40		-
	<b>Carried Forward to Summary</b>				-